

**Biological Data of Arctic Char, *Salvelinus alpinus*, from  
Selected Lakes in Quttinirpaaq National Park, Nunavut, 1990-  
2002**

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## ABSTRACT

Babaluk, J.A., C.D. Sawatzky, R.J. Wastle, and J.D. Reist. 2007. Biological data of Arctic char, *Salvelinus alpinus*, from selected lakes in Quttinirpaaq National Park, Nunavut, 1990-2002. Can. Data Rep. Fish. Aquat. Sci. 1196: vii + 78 p.

Selected biological data from Arctic char, *Salvelinus alpinus*, populations sampled between 1990 and 2002 in Quttinirpaaq National Park, Nunavut are tabulated and graphically presented.

Key words: Arctic char; Ellesmere Island; lakes survey; Nunavut; Quttinirpaaq National Park

## RÉSUMÉ

Babaluk, J.A., C.D. Sawatzky, R.J. Wastle and J.D. Reist. 2007. Biological data of Arctic char, *Salvelinus alpinus*, from selected lakes in Quttinirpaaq National Park, Nunavut, 1990-2002. Can. Data Rep. Fish. Aquat. Sci. 1196: vii + 78 p.

Les données biologiques choisies sur l'omble chevalier, *Salvelinus alpinus*, populations échantillonnées entre 1990 et 2002 dans le parc national Quttinirpaaq, Nunavut, sont tabulées et présentées sous forme de graphiques.

Mots clés : Omble chevalier; île d'Ellesmere; levé de lacs; Nunavut; parc national Quttinirpaaq

## INTRODUCTION

A basic understanding of the biology and diversity of the Arctic char, *Salvelinus alpinus*, populations in Quttinirpaaq National Park, Nunavut is fundamental to Parks Canada's long-term conservation and management plans for these fish (Parks Canada 1994). Arctic char is the only freshwater fish species in the Canadian High Arctic including Quttinirpaaq National Park (Scott and Crossman 1973; Parks Canada 1994). However, the species exhibits great diversity at a number of levels below that of species including: a) life history type (e.g., anadromous or non-anadromous), b) ecological type (e.g., pelagic or benthic forms), c) trophic type (e.g., planktivore or piscivore), d) evolutionary lineages (e.g., subspecies, biological stocks), as well as, e) variants within many of the above types (e.g., life history variability). This diversity can be observed through a number of techniques, but is best understood using several complementary approaches such as: a) morphology (e.g., body form and function), b) genetics (e.g., delineation of groups using DNA chemistry), c) stable isotopes and diet (e.g., trophic pattern), d) population dynamics (e.g., age and size structure), and e) otolith microchemistry (e.g., life history types, stock discrimination).

Fisheries and Oceans Canada (DFO), in collaboration with Parks Canada, has been assessing the diversity in Quttinirpaaq National Park Arctic char populations by these various methods since 1990. The majority of the work has centred on the Arctic char of Lake Hazen (e.g., Reist et al. 1995; Babaluk et al. 1997; Babaluk et al. 2001; Guiguer et al. 2002) but as opportunity presented itself, Arctic char populations in other lakes within the park were surveyed. This report presents selected biological data from 13 additional Quttinirpaaq National Park lakes that have been sampled to date.

## MATERIALS AND METHODS

### DESCRIPTION OF THE STUDY AREA

Quttinirpaaq National Park is located at the northern end of Ellesmere Island, Nunavut (Fig. 1). The most northern area of the Park, Cape Aldrich at 83° 06' N, is also the most northern point in the Canadian Arctic Archipelago. The park, with an area of 37 775 km<sup>2</sup>, is the second largest national park in Canada and is described in detail in Parks Canada (1994).

There are relatively few lakes in Quttinirpaaq National Park and the most productive ones are located on the Hazen Plateau or along the coastal areas north of the Grant Land Mountains (Fig. 1). Most of these lakes provide suitable habitat for some aquatic flora and invertebrates but are too shallow to support Arctic char (Parks Canada 1994). Lakes for this study were chosen because they were known to contain populations of Arctic char (R. Wissink, Parks Canada, Pangnirtung, pers. comm. 1992).

## COLLECTION METHODS

Arctic char were collected from 13 lakes in Quttinirpaaq National Park between 1990 and 2002 (unnamed lakes were assigned unofficial names based on nearby officially-named topographic features): an unnamed lake, hereafter Clements Markham Lake (82° 38' N, 68° 50' W) in 2001 and 2002, Craig Lake (81° 52' N, 68° 47' W) in 1992, Ekblaw Lake (81° 40' N, 75° 40' W) in 1998, Kilbourne Lake (81° 52' N, 68° 25' W) in 1990 and 1996, an unnamed lake, hereafter Lake A (82° 06' N, 68° 37' W) in 1995 and 1996, Lake Alexandra (81° 46' N, 65° 32' W) in 1995, an unnamed lake, hereafter Lake B (82° 09' N, 68° 29' W) in 1995 and 1996, Lewis Lake (81° 30' N, 74° 35' W) in 1998, an unnamed lake, hereafter Lower Beaufort Lake (81° 54' N, 63° 17' W) in 2001, Murray Lake (81° 20' N, 69° 34' W) in 1998, an unnamed lake, hereafter Rambow Hill Lake (83° 00' N, 75° 27' W) in 2002, Turnabout Lake (81° 54' N, 68° 16' W) in 2001, and an unnamed lake, hereafter Upper Beaufort Lake (81° 54' N, 63° 16' W) in 2001 (see Fig. 1).

All fish were captured by multi-mesh, nylon, multifilament gill nets (gangs of 10, 12.5, 16, 19, 22 and 25 mm bar-mesh and 10, 19, 33, 45, 55 and 60 mm bar-mesh) set either under the ice or in open water or angling (jigging) through the ice with un-baited lures as follows: Clements Markham Lake - gill nets in open water, Craig Lake - angling, Ekblaw Lake - gill nets in open water, Kilbourne Lake - angling, Lake A - angling and gill nets through the ice, Lake Alexandra - angling and gill nets through the ice, Lake B - angling, Lewis Lake - gill nets in open water, Lower Beaufort Lake - gill nets in open water, Murray Lake - gill nets in open water, Rambow Hill Lake - gill nets in open water, Turnabout Lake - gill nets in open water, and Upper Beaufort Lake - gill nets in open water.

## BIOLOGICAL DATA

Due to logistical constraints, limited biological variables were taken in the field. Fork length (nearest mm) and weight (nearest g) were taken in the field from some fresh fish specimens. All Arctic char collected were frozen whole in the field and transported to DFO (Winnipeg) for subsequent processing. This included measuring and weighing of thawed individuals, assessment of sex (F = female, M = male and U = unknown/uncertain), gonad weight and absolute fecundity (total egg count), where applicable. Otoliths were collected for age determination. Ages were determined using the technique described in Reist et al. (1995) and criteria described by Nordeng (1961) and Chilton and Beamish (1982).

From the lengths and weights of selected individual fish recorded in the field and the subsequent lengths and weights of these fish determined after thawing in the laboratory, we derived the following equations to convert all thawed lengths and weights to "fresh" values:

Fresh fork length = 1.016721 (thawed fork length) and

Fresh weight = 1.013071 (thawed weight).

"Fresh" length and weight data are presented in the subsequent tables and have been used to produce applicable figures. A "blank value" in a table indicates that that parameter was not assessed or was not applicable for that fish.

## DATA ANALYSIS

Length, weight and age data were analysed using SigmaStat® (3.1) and figures were created using SigmaPlot 2000® personal computer software programs.

Length-weight relationships were described by the equation:

$$\text{Log}_{10}W = a + b (\text{log}_{10}L)$$

where: W = weight in grams

L = fork length in millimetres

a = Y axis intercept

b = slope of the regression line.

## DATA PRESENTATION

Biological data for individual Arctic char collected from selected Quttinirpaaq National Park lakes are presented in alphabetic order as follows: Clements Markham Lake (Table 1), Craig Lake (Table 2), Ekblaw Lake (Table 3), Kilbourne Lake (Table 4), Lake A (Table 5), Lake Alexandra (Table 6), Lake B (Table 7), Lewis Lake (Table 8), Lower Beaufort Lake (Table 9), Murray Lake (Table 10), Rambow Hill Lake (Table 11), Turnabout Lake (Table 12), and Upper Beaufort Lake (Table 13).

Length-frequency distributions for Arctic char collected from Quttinirpaaq National Park lakes are graphically presented as follows: Clements Markham Lake (Fig. 2), Craig Lake (Fig. 6), Ekblaw Lake (Fig. 10), Kilbourne Lake (Fig. 14), Lake A (Fig. 18), Lake Alexandra (Fig. 22), Lake B (Fig. 26), Lewis Lake (Fig. 30), Lower Beaufort Lake (Fig. 34), Murray Lake (Fig. 38), Rambow Hill Lake (Fig. 42), Turnabout Lake (Fig. 46), and Upper Beaufort Lake (Fig. 50).

Age-frequency distributions for Arctic char collected from Quttinirpaaq National Park lakes are graphically presented as follows: Clements Markham Lake (Fig. 3), Craig Lake (Fig. 7), Ekblaw Lake (Fig. 11), Kilbourne Lake (Fig. 15), Lake A (Fig. 19), Lake Alexandra (Fig. 23), Lake B (Fig. 27), Lewis Lake (Fig. 31), Lower Beaufort Lake (Fig. 35), Murray Lake (Fig. 39), Rambow Hill Lake (Fig. 43), Turnabout Lake (Fig. 47), and Upper Beaufort Lake (Fig. 51).

Relationships between fork length and age (i.e., growth rate) for Arctic char collected from Quttinirpaaq National Park lakes are graphically presented as follows: Clements Markham Lake (Fig. 4), Craig Lake (Fig. 8), Ekblaw Lake (Fig. 12), Kilbourne Lake (Fig. 16), Lake A (Fig. 20), Lake Alexandra (Fig. 24), Lake B (Fig. 28), Lewis Lake (Fig. 32), Lower Beaufort Lake (Fig. 36), Murray Lake (Fig. 40), Rambow Hill Lake (Fig. 44), Turnabout Lake (Fig. 48), and Upper Beaufort Lake (Fig. 52).

Relationships between fork length and body weight, including length-weight equations, for Arctic char collected from Quttinirpaaq National Park lakes are graphically presented as follows: Clements Markham Lake (Fig. 5), Craig Lake (Fig. 9), Ekblaw Lake (Fig. 13), Kilbourne Lake (Fig. 17), Lake A (Fig. 21), Lake Alexandra (Fig. 25), Lake B (Fig. 29), Lewis Lake (Fig. 33), Lower Beaufort Lake (Fig. 37), Murray Lake (Fig. 41), Rambow Hill Lake (Fig. 45), Turnabout Lake (Fig. 49), and Upper Beaufort Lake (Fig. 53).

An electronic version of the raw data is available from the senior author c/o Fisheries and Oceans Canada, 501 University Crescent, Winnipeg, Manitoba, R3T 2N6, Canada.

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Table 1. Biological data for Arctic char captured in Clements Markham Lake in 2001 and 2002.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
1	47317	10 08 2001	430	840	F	19	41.6	1353
2	47318	10 08 2001	353	390	F	10	2.4	
3	47319	10 08 2001	410	690	F	19	8.4	
4	47320	10 08 2001	413	510	M	32	2.0	
5	49075	17-18 06 2002	103	8	U	2		
6	49076	17-18 06 2002	115	11	U	4		
7	49077	17-18 06 2002	170	47	U	5		
8	49078	17-18 06 2002	194	72	M	7	3.4	
9	49079	17-18 06 2002	193	65	F	9	1.3	
10	49080	17-18 06 2002	210	90	M	9		
11	49081	17-18 06 2002	223	90	F	11	0.8	
12	49082	17-18 06 2002	114	10	U	3		
13	49083	17-18 06 2002	197	75	F	7	0.1	
14	49084	17-18 06 2002	207	94	M	25	2.8	
15	49085	17-18 06 2002	221	96	M	7		
16	49086	17-18 06 2002	211	110	M	11	5.1	
17	49087	17-18 06 2002	193	67	M	14	1.8	
18	49088	17-18 06 2002	209	86	F	12	0.6	
19	49089	17-18 06 2002	252	138	M	9		
20	49090	17-18 06 2002	247	157	M	18	0.7	
21	49091	17-18 06 2002	267	170	F	12	1.3	
22	49092	17-18 06 2002	270	198	M	18	7.1	
23	49093	17-18 06 2002	347	303	F	27	2.2	
24	49094	17-18 06 2002	405	512	F	33	2.7	
25	49095	17-18 06 2002	454	774	F	27	4.0	
26	49096	17-18 06 2002	448	746	M	18	1.5	



Table 2. Biological data for Arctic char captured in Craig Lake in 1992.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
1	38434	16 06 1992	241	133	M	11	0.1	242
2	38435	16 06 1992	273	161	F	17	3.5	
3	38436	16 06 1992	252	144	M	13	0.1	
4	38437	16 06 1992	232	115	M	12	0.1	
5	38438	16 06 1992	297	146	F	25	1.9	
6	38439	16 06 1992	232	123	F	10	1.9	208
7	38440	16 06 1992	223	95	M	10	0.1	
8	38441	16 06 1992	272	165	F	13	1.6	
9	38442	16 06 1992	233	120	M	9	0.1	
10	38443	16 06 1992	257	159	F	11	1.4	
11	38444	16 06 1992	218	89	M		0.1	218
12	38445	16 06 1992	281	184	M	16	0.5	
13	38446	16 06 1992	247	137	M	12	0.1	
14	38447	16 06 1992	210	83	F	8	0.1	
15	38448	16 06 1992	220	95	F	8	0.2	
16	38449	16 06 1992	246	125	M	8	0.1	
17	38450	16 06 1992	241	129	M	10	0.1	
18	38451	16 06 1992	259	139	F	15	1.5	
19	38452	16 06 1992	274	184	M	13	0.1	
20	38453	16 06 1992	265	167	M	14	0.4	
21	38454	16 06 1992	249	154	F	13	1.2	
22	38455	16 06 1992	264	173	M	12	0.1	
23	38456	16 06 1992	217	88	M	11	0.1	
24	38457	16 06 1992	271	178	M	14	0.2	
25	38458	16 06 1992	288	157	F	27	3.8	
26	38459	16 06 1992	326	226	M	23	0.5	183
27	38460	16 06 1992	275	171	M	14	0.6	
28	38461	16 06 1992	244	124	M	11	0.1	
29	38462	16 06 1992	275	183	M	15	0.6	
30	38463	16 06 1992	283	186	M	18	1.1	
31	38464	16 06 1992	265	162	M	11	0.1	392
32	38465	16 06 1992	294	229	M	15	0.4	
33	38466	16 06 1992	243	141	F	12	4.2	
34	38467	16 06 1992	301	232	M	17	0.5	
35	38468	16 06 1992	275	170	M	16	0.6	
36	38469	16 06 1992	311	219	M	15	0.7	337
37	38470	16 06 1992	241	135	F	11	1.5	
38	38471	16 06 1992	279	187	F	13	4.4	
39	38472	16 06 1992	259	175	F	13	3.9	
40	38473	16 06 1992	250	135	F	13	2.2	
41	38474	16 06 1992	312	250	F	13	4.1	451



Table 2. continued.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
42	38475	16 06 1992	255	148	M	11	0.1	
43	38476	16 06 1992	238	123	M	11	0.1	
44	38477	16 06 1992	246	127	M	11	0.1	
45	38478	16 06 1992	202	72	M	9	0.1	
46	38479	16 06 1992	177	51	F	7	0.1	
47	38480	16 06 1992	203	75	F	7	0.1	
48	38481	16 06 1992	177	47	F	6	0.1	
49	38482	16 06 1992	146	22	F		0.1	
50	38483	16 06 1992	172	32	F	6	0.1	

Table 3. Biological data for Arctic char captured in Ekblaw Lake in 1998.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
1	43718	28 07 1998	131	21	M	13	1.0	
2	43719	28 07 1998	210	74	F	13	1.0	
3	43720	28 07 1998	175	50	M	16	2.0	
4	43721	28 07 1998	173	44	F	20	3.8	69
5	43722	28 07 1998	170	46	F	21	4.4	87
6	43723	28 07 1998	158	34	M	12	2.0	
7	43724	28 07 1998	147	32	M	13	2.1	
8	43725	28 07 1998	155	33	F	16	1.0	
9	43726	28 07 1998	119	15	M	11	1.0	
10	43727	28 07 1998	131	22	M	12	1.0	
11	43728	28 07 1998	124	20	M	11	1.0	
12	43729	28 07 1998	126	22	M	13	1.0	
13	43730	28 07 1998	178	54	M	14	0.4	
14	43731	28 07 1998	156	44	M	12	2.0	
15	43732	28 07 1998	173	54	F	14	4.6	99
16	43733	28 07 1998	175	53	M	12	2.4	
17	43734	28 07 1998	153	32	M	15	3.0	
18	43735	28 07 1998	218	90	F	20	2.0	
19	43736	28 07 1998	193	53	F	27	1.0	
20	43737	28 07 1998	217	92	F	12	6.0	209
21	43738	28 07 1998	180	58	F	24	6.4	108
22	43739	28 07 1998	199	70	F	20	6.7	127
23	43740	28 07 1998	224	105	F	14	1.7	
24	43741	28 07 1998	102	10	F	4	0.1	
25	43742	28 07 1998	122	18	F	8	0.1	
26	43743	28 07 1998	123	22	F	15	0.1	
27	43744	28 07 1998	128	23	M	10	1.8	
28	43745	28 07 1998	155	38	F	13	1.0	
29	43746	28 07 1998	216	103	F	21	11.1	177
30	43747	28 07 1998	169	43	M	20	1.0	
31	43748	28 07 1998	489	1540	M	20	50.6	

Table 4. Biological data for Arctic char captured in Kilbourne Lake in 1990 and 1996.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
1	27466	15 05 1990	286	235	U	11		
2	27467	15 05 1990	287	219	U	10		
3	27468	15 05 1990	232	107	U	8		
4	27469	15 05 1990	205	72	U	8		
5	42068	27 05 1996	305	270	M	16	1.2	
6	42069	27 05 1996	277	213	M	15	1.0	
7	42730	27 05 1996	268	167	F	17	3.0	304
8	42731	27 05 1996	285	217	M	15	1.0	
9	42732	27 05 1996	290	233	M	18	1.0	
10	42733	27 05 1996	285	227	M	15	1.0	
11	42734	27 05 1996	292	165	F	22	2.0	
12	42735	27 05 1996	270	160	F	20	1.0	
13	42736	27 05 1996	245	154	F	11	1.0	
14	42737	27 05 1996	275	197	F	15	5.1	236
15	42738	27 05 1996	308	283	M	22	1.7	
16	42739	27 05 1996	259	177	M	12	1.0	
17	42740	27 05 1996	269	188	F	14	1.8	
18	42741	27 05 1996	261	171	F	15	1.5	
19	42742	27 05 1996	275	181	F	15	1.0	
20	42743	27 05 1996	259	159	F	14	2.5	244
21	42744	27 05 1996	310	252	M	19	1.0	
22	42745	27 05 1996	249	145	F	10	1.0	
23	42746	27 05 1996	277	200	F	20	5.3	286
24	42747	27 05 1996	285	234	M	15	1.0	
25	42748	27 05 1996	260	173	F	15	4.0	277
26	42749	27 05 1996	312	260	M	17	1.0	
27	42750	27 05 1996	293	218	M	19	2.0	
28	42751	27 05 1996	299	211	M	16	1.0	
29	42752	27 05 1996	285	218	M	17	1.0	
30	42753	27 05 1996	228	112	F	9	1.0	
31	42754	27 05 1996	287	229	M	15	1.0	
32	42755	27 05 1996	285	225	M	14	1.0	
33	42756	27 05 1996	271	192	M	11	1.0	
34	42757	27 05 1996	283	217	M	13	1.0	
35	42758	27 05 1996	246	149	F	9	1.0	
36	42759	27 05 1996	282	205	M	13	1.0	
37	42760	27 05 1996	266	161	F	15	1.0	
38	42761	27 05 1996	276	162	F	19	2.2	227
39	42762	27 05 1996	297	274	M	17	1.2	
40	42763	27 05 1996	292	248	M	17	1.2	
41	42764	27 05 1996	269	199	F	16	4.1	430

Table 4. continued.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
42	42765	27 05 1996	232	135	F	11	2.3	268
43	42766	27 05 1996	283	223	M	18	3.0	
44	42767	27 05 1996	294	245	M	16	1.0	
45	42768	27 05 1996	264	177	F	16	4.6	289
46	42769	27 05 1996	268	197	F	13	2.6	
47	42770	27 05 1996	258	163	F	15	2.1	
48	42771	27 05 1996	261	164	M	13	1.0	
49	42772	27 05 1996	244	139	F	11	1.0	
50	42773	27 05 1996	262	179	F	16	2.1	369
51	42774	27 05 1996	297	223	M	18	1.0	
52	42775	27 05 1996	267	152	F	20	1.0	
53	42776	27 05 1996	296	220	M	18	1.2	
54	42777	27 05 1996	260	171	M	13	1.0	
55	42778	27 05 1996	296	255	M	21	2.6	

Table 5. Biological data for Arctic char captured in Lake A in 1995 and 1996.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
1	42617	21 05 1995	280	140	F	20	1.5	
2	42618	21 05 1995	290	161	F	24	2.8	
3	42619	21 05 1995	235	103	M	11	1.0	
4	42620	21 05 1995	290	201	M	16	1.0	
5	42621	21 05 1995	261	134	F	13	1.2	
6	42644	22 05 1996	272	186	F	14	4.2	376
7	42645	22 05 1996	244	119	F	10	1.0	
8	42646	22 05 1996	275	181	F	12	1.5	
9	42647	22 05 1996	192	60	M	8	1.0	
10	42648	22 05 1996	169	43	F	8	1.0	
11	42649	22 05 1996	291	160	F	13	5.3	338
12	42650	22 05 1996	447	615	M	17	2.2	
13	42651	22 05 1996	455	849	F	26	10.3	1535
14	42652	22 05 1996	588	1730	M	28	5.0	
15	42653	22 05 1996	539	1246	M	20	2.5	
16	42654	22 05 1996	541	1678	M	17	3.6	
17	42655	22 05 1996	303	188	F	23	5.0	254
18	42656	22 05 1996	303	235	M	13	1.0	
19	42657	22 05 1996	287	172	F	18	2.9	360
20	42658	22 05 1996	582	1965	M	17	3.4	
21	42659	22 05 1996	524	1352	F	20	13.3	1610
22	42660	22 05 1996	281	208	F	17	4.4	352
23	42661	22 05 1996	208	76	F	8	1.0	
24	42662	22 05 1996	221	93	M	7	1.0	
25	42663	22 05 1996	216	82	M	10	1.0	
26	42664	22 05 1996	171	44	M	7	1.0	
27	42665	22 05 1996	289	210	F	15	7.3	455
28	42666	22 05 1996	242	125	M	13	2.1	
29	42667	22 05 1996	236	105	M	7	1.0	
30	42668	22 05 1996	305	119	F	29	1.4	
31	42669	22 05 1996	287	161	F	26	2.5	330
32	42670	22 05 1996	381	429	M	18	1.0	
33	42671	22 05 1996	279	168	F	18	1.0	
34	42672	22 05 1996	290	189	F	18	5.6	280
35	42673	22 05 1996	208	85	F	7	1.0	
36	42674	22 05 1996	259	163	F	10	1.0	
37	42675	22 05 1996	186	57	F	8	1.0	
38	42676	22 05 1996	183	54	F	8	1.0	
39	42677	22 05 1996	183	55	F	7	1.0	
40	42678	22 05 1996	264	171	F	12	2.3	329
41	42679	22 05 1996	239	134	M	10	1.0	

Table 5. continued.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
42	42680	22 05 1996	286	171	M	16	1.0	
43	42681	22 05 1996	205	94	M	8	1.0	
44	42682	22 05 1996	196	71	F	8	1.0	
45	42683	22 05 1996	190	67	M	8	1.0	
46	42684	22 05 1996	168	55	M	8	1.0	
47	42685	22 05 1996	188	67	M	9	1.0	

Table 6. Biological data for Arctic char captured in Lake Alexandra in 1995.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
1	42338	11 05 1995	222	192	F	22	2.1	156
2	42339	11 05 1995	366	869	F	19	4.8	532
3	42340	11 05 1995	404	1437	F	26	22.5	1015
4	42341	11 05 1995	310	618	M	21	2.0	
5	42342	11 05 1995	346	750	F	13	3.1	
6	42343	11 05 1995	519	3242	F	14	13.0	
7	42344	11 05 1995	458	2138	M	13	1.0	
8	42345	11 05 1995	208	166	F	17	1.0	92
9	42346	11 05 1995	185	113	M	14	1.0	
10	42347	11 05 1995	175	120	M	10	1.0	
11	42348	11 05 1995	201	156	M	18	1.0	
12	42349	11 05 1995	222	184	M	19	1.5	
13	42350	11 05 1995	251	278	F	7	1.0	
14	42351	11 05 1995	336	575	F	28	2.7	
15	42352	11 05 1995	384	1050	F	15	3.7	
16	42353	11 05 1995	150	67	F	11	1.0	
17	42354	11 05 1995	175	95	F	21	1.0	
18	42355	11 05 1995	163	77	F	17	1.0	
19	42356	11 05 1995	171	91	F	20	1.0	
20	42357	11 05 1995	168	93	F	10	1.0	
21	42358	11 05 1995	185	95	M	19	1.0	
22	42359	11 05 1995	177	101	F	18	1.0	
23	42555	11 05 1995	133	21	F	7	1.0	
24	42556	11 05 1995	333	325	F	13	3.4	349
25	42557	11 05 1995	198	65	M	7	1.0	
26	42558	11 05 1995	168	46	F	10	1.0	
27	42559	11 05 1995	193	61	M	18	1.2	
28	42560	11 05 1995	190	60	M	15	1.0	
29	42561	11 05 1995	185	67	M	17	1.3	
30	42562	11 05 1995	191	56	F	6	1.0	
31	42563	11 05 1995	197	66	M	17	1.1	
32	42564	11 05 1995	218	86	U	20		
33	42565	11 05 1995	185	55	M		1.5	
34	42566	11 05 1995	205	81	M	7	1.0	
35	42567	11 05 1995	166	46	M	11	1.0	
36	42568	11 05 1995	191	58	F	19	2.0	
37	42569	11 05 1995	200	71	M	13	1.2	
38	42574	11 05 1995	117	15	M	6	1.0	
39	42575	11 05 1995	155	36	F	11	1.0	
40	42576	11 05 1995	147	34	F	9	1.5	69
41	42577	11 05 1995	122	17	F	7	1.0	

Table 6. continued.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
42	42578	11 05 1995	147	34	F	10	1.3	55
43	42579	11 05 1995	125	20	M	6	1.0	
44	42580	11 05 1995	147	32	M	8	1.0	
45	42581	11 05 1995	139	28	M	7	1.0	
46	42582	11 05 1995	159	40	F	13	1.0	
47	42583	11 05 1995	171	46	M	12	1.4	
48	42584	11 05 1995	159	36	M	12		
49	42585	11 05 1995	184	46	F	18	1.1	
50	42586	11 05 1995	173	47	F	18	1.3	
51	42587	11 05 1995	161	43	M	11	1.0	
52	42588	11 05 1995	158	41	F	13	1.0	99
53	42589	11 05 1995	162	43	F	13	1.0	
54	42590	11 05 1995	188	56	M	19	1.0	
55	42591	11 05 1995	164	44	F	15	1.9	
56	42592	11 05 1995	145	31	F	14	1.0	
57	42593	11 05 1995	177	54	M	13	1.0	
58	42594	11 05 1995	179	41	F	19	1.0	
59	42595	11 05 1995	150	35	F	7	1.0	
60	42596	11 05 1995	147	33	F	11	1.0	
61	42597	11 05 1995	165	43	M	10	1.2	96
62	42598	11 05 1995	160	45	F	10	1.4	
63	42599	11 05 1995	181	52	M	13	1.1	
64	42600	11 05 1995	191	63	M	16	1.0	
65	42601	11 05 1995	220	100	M	21	1.4	
66	42602	11 05 1995	219	87	F	14	3.5	
67	42603	11 05 1995	204	72	M	20	1.5	
68	42604	11 05 1995	170	48	F	12	1.0	
69	42605	11 05 1995	165	43	M	18	1.0	
70	42606	11 05 1995	183	54	F	16	1.3	55
71	42607	11 05 1995	191	58	F	12	1.0	
72	42608	11 05 1995	184	54	M	12	1.0	
73	42609	11 05 1995	168	45	M	11	1.0	
74	42610	11 05 1995	160	41	M	9	1.0	
75	42611	11 05 1995	159	37	M	13	1.0	
76	42612	11 05 1995	196	68	M	14	1.0	
77	42613	11 05 1995	262	150	F	13	1.0	
78	42614	11 05 1995	214	73	F	7	1.0	
79	42615	11 05 1995	200	64	M	20	1.0	95
80	42616	11 05 1995	184	59	M	10	1.0	
81	42779	11 05 1995	165	43	F	11	1.0	
82	42780	11 05 1995	252		M	9	1.0	
83	42781	11 05 1995	168	49	F	17	1.2	



Table 6. continued.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
84	42782	11 05 1995	171	34	M	20	1.0	
85	42783	11 05 1995	194	62	U	16		
86	42784	11 05 1995	171	46	M	13	1.0	
87	42785	11 05 1995	142	26	M	8	1.0	
88	42786	11 05 1995	174	42	M	14	1.0	
89	42787	11 05 1995	175	48	M	17	1.0	
90	42788	11 05 1995	176	51	F	7	1.0	
91	42789	11 05 1995	155	38	F	13	1.3	64
92	42790	11 05 1995	168	38	M	16	1.0	
93	42791	11 05 1995	145	31	F	7	1.0	
94	42792	11 05 1995	147	32	F	12	1.0	
95	42793	11 05 1995	150	31	M	7	1.0	
96	42794	11 05 1995	131	25	F	8	1.0	
97	42795	11 05 1995	109	16	M	6	1.0	
98	42796	11 05 1995		10	F	6	1.0	
99	42797	11 05 1995	99	10	F	5	1.0	
100	42798	11 05 1995	106	10	F	4	1.0	
101	42799	11 05 1995	122	20	M	7	1.0	
102	42800	11 05 1995	117	14	F	6	1.0	

Table 7. Biological data for Arctic char captured in Lake B in 1995 and 1996.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
1	42622	22 05 1995	193	60	F	7	1.0	
2	42623	22 05 1995	262	127	F	16	1.0	
3	42624	22 05 1995	264	129	M	12	1.0	
4	42625	22 05 1995	226	99	F	10	1.0	
5	42626	22 05 1995	262	108	F	13	1.0	
6	42627	22 05 1995	266	139	M	17	1.0	
7	42628	22 05 1995	259	121	M	15	1.0	
8	42629	22 05 1995	259	126	M	16	1.0	
9	42630	22 05 1995	417	483	M	28	1.0	
10	42686	22 05 1996	277	117	M	20	1.0	
11	42687	22 05 1996	246	138	M	12	1.0	
12	42688	22 05 1996	272	150	M	16	1.0	
13	42689	22 05 1996	193	72	F	8	1.0	
14	42690	22 05 1996	234	95	F	13	1.0	
15	42691	22 05 1996	207	75	F	9	1.0	
16	42692	22 05 1996	195	68	M	8	1.0	
17	42693	22 05 1996	221	88	F	10	1.0	
18	42694	22 05 1996	235	113	M	10	1.0	
19	42695	22 05 1996	277	184	M	17	1.0	
20	42696	22 05 1996	256	137	M	15	1.0	
21	42697	22 05 1996	278	156	M	17	1.0	
22	42698	22 05 1996	283	173	M	14	1.9	
23	42699	22 05 1996	251	148	M	11	1.0	
24	42700	22 05 1996	257	119	F	14	2.0	
25	42701	22 05 1996	251	142	M	14	1.0	
26	42702	22 05 1996	246	138	F	12	3.8	272
27	42703	22 05 1996	245	131	F	10	1.9	
28	42704	22 05 1996	240	112	M	14	2.0	
29	42705	22 05 1996	259	110	F	17	1.0	
30	42706	22 05 1996	187	62	M	6	1.0	
31	42707	22 05 1996	480	916	M	26	20.9	
32	42708	22 05 1996	376	348	M	27	2.0	
33	42709	22 05 1996	262	123	F	19	2.0	208
34	42710	22 05 1996	250	110	F	13	2.0	187
35	42711	22 05 1996	214	82	M	8	1.0	
36	42712	22 05 1996	246	128	F	12	3.7	294
37	42713	22 05 1996	200	69	M	8	1.0	
38	42714	22 05 1996	269	113	M	15	1.0	
39	42715	22 05 1996	243	120	M	12	1.0	
40	42716	22 05 1996	242	119	M	13	1.0	
41	42717	22 05 1996	257	137	F	15	3.9	223

Table 7. continued.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
42	42718	22 05 1996	271	158	F	16	3.7	180
43	42719	22 05 1996	269	169	M	14	1.3	
44	42720	22 05 1996	226	110	M	10	1.0	
45	42721	22 05 1996	234	110	M	9	1.0	
46	42722	22 05 1996	244	121	F	11	1.0	
47	42723	22 05 1996	252	145	M	11	1.0	
48	42724	22 05 1996	269	147	M	16	2.0	
49	42725	22 05 1996	267	145	M	17	1.5	
50	42726	22 05 1996	258	119	M	16	1.0	
51	42727	22 05 1996	287	105	M	23	1.0	
52	42728	22 05 1996	211	87	M	9	1.0	
53	42729	22 05 1996	247	143	M	11	1.0	

Table 8. Biological data for Arctic char captured in Lewis Lake in 1998.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
1	43696	27 07 1998	98	10	F	3	0.1	
2	43697	27 07 1998	92	12	M	3	0.1	
3	43698	27 07 1998	110	18	F	4	0.1	
4	43699	27 07 1998	124	26	M	6	1.5	
5	43700	27 07 1998	134	33	F	5	1.0	
6	43701	27 07 1998	130	29	M	5	2.7	
7	43702	27 07 1998	161	47	M	7	3.6	
8	43703	27 07 1998	145	42	F	5	1.4	
9	43704	27 07 1998	132	27	F	7	1.0	
10	43705	27 07 1998	158	54	M	10	4.4	
11	43706	27 07 1998	153	46	M	11	3.5	
12	43707	27 07 1998	153	46	F	9	2.0	72
13	43708	27 07 1998	161	56	F	6	3.2	135
14	43709	27 07 1998	150	141	M	12	1.0	
15	43710	27 07 1998	539	1949	M	18	38.3	
16	43711	27 07 1998	105	14	M	4	0.6	
17	43712	27 07 1998	92	9	U	3		
18	43713	27 07 1998	168	47	F	11	2.0	53
19	43714	27 07 1998	173	69	F	7	3.5	212
20	43715	27 07 1998	176	53	F	7	2.2	117

Table 9. Biological data for Arctic char captured in Lower Beaufort Lake in 2001.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
1	47371	09 08 2001	430	740	M	19	1.2	
2	47372	09 08 2001	420	700	F	18	80.1	1477
3	47373	09 08 2001	366	440	F	13	2.0	
4	47374	09 08 2001	327	320	M	28	15.4	
5	47375	09 08 2001	247	150	F	13	9.5	213
6	47376	09 08 2001	325	340	F	14	2.7	
7	47377	09 08 2001	313	260	F	14	2.7	
8	47378	09 08 2001	392	510	F	18	3.9	
9	47379	09 08 2001	375	460	M	24	20.0	
10	47380	09 08 2001	261	150	M	12		
11	47381	09 08 2001	243	120	F	10	0.7	
12	47382	09 08 2001	257	150	F	14	11.9	287
13	47383	09 08 2001	191	55	F	14	6.7	145
14	47384	09 08 2001	209	69	F	10	1.1	
15	47385	09 08 2001	190	57	M	10	0.1	
16	47386	09 08 2001	187	57	F	14	5.5	159
17	47387	09 08 2001	150	30	F	10	4.2	103
18	47388	09 08 2001	147	30	F	7	2.3	87
19	47389	09 08 2001	145	24	M	7		
20	47390	09 08 2001	118	13	M	4		
21	47391	09 08 2001	109	11	M	4		
22	47392	09 08 2001	105	11	M	4		
23	47393	09 08 2001	102	10	F	4		
24	47394	09 08 2001	101	10	M	3		

Table 10. Biological data for Arctic char captured in Murray Lake in 1998.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
1	43625	26 07 1998	534	1325	F	30	12.2	
2	43626	26 07 1998	420	664	M	16	0.5	
3	43627	26 07 1998	529	1522	F	27	1.0	
4	43628	26 07 1998	485	965	M	23	2.0	
5	43629	26 07 1998	443	752	F	19	7.8	
6	43630	26 07 1998	590	1946	F	24	121.8	2041
7	43631	26 07 1998	516	1173	F	25	8.4	
8	43632	26 07 1998	534	1493	F	23	76.3	866
9	43633	26 07 1998	442	697	M	17	2.0	
10	43634	26 07 1998	470	892	F	16	5.2	
11	43635	26 07 1998	267	149	M	14	0.1	
12	43636	26 07 1998	229	102	F	14	1.6	
13	43637	26 07 1998	257	160	M	14	0.1	
14	43638	26 07 1998	270	182	F	16	1.5	
15	43639	26 07 1998	241	118	F	16	4.2	78
16	43640	26 07 1998	322	274	M	21	0.1	
17	43641	26 07 1998	259	158	F	15	5.4	
18	43642	26 07 1998	491	909	M	29	1.0	
19	43643	26 07 1998	498	919	M	30	1.0	
20	43644	26 07 1998	427	662	M	16	1.0	
21	43645	26 07 1998	491	1044	F	17	7.3	
22	43646	26 07 1998	689	3316	M	27	121.1	
23	43647	26 07 1998	630	2617	F	20	267.8	2073
24	43648	26 07 1998	572	1788	M	25	4.2	
25	43649	26 07 1998	635	1928	M	27	4.0	
26	43650	26 07 1998	266	161	F	18	4.5	
27	43651	26 07 1998	241	87	F	17	2.0	
28	43652	26 07 1998	227	83	F	17	1.2	
29	43653	26 07 1998	239	123	M	14	1.0	
30	43654	26 07 1998	250	130	F	26	3.4	
31	43655	26 07 1998	244	137	M	13	0.1	
32	43656	26 07 1998	239	105	M	12	0.1	
33	43657	26 07 1998	252	137	F	16	2.0	
34	43658	26 07 1998	230	102	F	12	2.0	
35	43659	26 07 1998	245	123	F	14	2.0	
36	43660	26 07 1998	280	178	F	16	0.2	
37	43661	26 07 1998	247	137	M	16	0.1	
38	43662	26 07 1998	229	104	M	14	0.1	
39	43663	26 07 1998	256	132	M	20	1.0	
40	43664	26 07 1998	327	296	F	16	2.8	
41	43665	26 07 1998	113	15	M	5	0.1	

Table 10. continued.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
42	43666	26 07 1998	100	11	M	4	0.1	
43	43667	26 07 1998	92	10	U	4		
44	43668	26 07 1998	120	15	F	8	0.1	
45	43669	26 07 1998	102	11	M	5	0.1	
46	43670	26 07 1998	102	10	U	5		
47	43671	26 07 1998	118	15	M	6	0.1	
48	43672	26 07 1998	155	41	M	10	1.5	
49	43673	26 07 1998	168	46	M	13	1.7	
50	43674	26 07 1998	203	80	M	10	0.1	
51	43675	26 07 1998	202	67	F	9	2.0	
52	43676	26 07 1998	158	35	F	9	2.1	65
53	43677	26 07 1998	161	36	F	7	1.0	
54	43678	26 07 1998	182	59	M	14	3.1	
55	43679	26 07 1998	196	63	F	15	3.0	74
56	43680	26 07 1998	319	256	M	24	0.1	
57	43681	26 07 1998	265	169	M	14	0.1	
58	43682	26 07 1998	333	254	M	16	0.1	
59	43683	26 07 1998	237	123	F	17	2.0	
60	43684	26 07 1998	236	109	M	14	5.9	
61	43685	26 07 1998	269	179	M	18	1.0	
62	43686	26 07 1998	303	229	F	15	1.0	
63	43687	26 07 1998	254	131	F	16	2.0	
64	43688	26 07 1998	257	157	F	18	2.0	
65	43689	26 07 1998	249	136	F	16	5.9	209
66	43690	26 07 1998	210	86	F	11	1.5	
67	43691	26 07 1998	244	125	F	14	1.0	71
68	43692	26 07 1998	669	2639	M	30	17.6	
69	43693	26 07 1998	226	90	F	12	1.0	
70	43694	26 07 1998	173	43	F	13	1.0	
71	43695	26 07 1998	264	164	F	15	7.0	

Table 11. Biological data for Arctic char captured in Rambow Hill Lake in 2002.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
1	49047	27-28 07 2002	356	526	M	15	19.1	
2	49048	27-28 07 2002	344	404	M	11	17.1	
3	49049	27-28 07 2002	303	296	F	10	24.0	
4	49050	27-28 07 2002	286	211	F	12	2.0	
5	49051	27-28 07 2002	237	124	F	10	1.7	
6	49052	27-28 07 2002	131	22	F	3		
7	49053	27-28 07 2002	137	24	M	6	1.4	
8	49054	27-28 07 2002	260	187	F	10	20.3	
9	49055	27-28 07 2002	276	199	M	11	0.4	
10	49056	27-28 07 2002	273	172	M	14	7.5	
11	49057	27-28 07 2002	251	149	F	14	11.3	
12	49058	27-28 07 2002	246	119	F	10	1.6	
13	49059	27-28 07 2002	247	147	F	9	9.6	
14	49060	27-28 07 2002	99	10	F			
15	49061	27-28 07 2002	95	8	F	3		
16	49062	27-28 07 2002	97	8	M	3		
17	49063	27-28 07 2002	115	14	M	3		
18	49064	27-28 07 2002	219	103	F	8	1	
19	49065	27-28 07 2002	205	82	F	18	1.8	
20	49066	27-28 07 2002	207	89	M	12	4.9	
21	49067	27-28 07 2002	239	132	M	12	6.2	
22	49068	27-28 07 2002	229	103	M	7		
23	49069	27-28 07 2002	234	109	M	11		
24	49070	27-28 07 2002	256	170	F	10	11.6	
25	49071	27-28 07 2002	59	1	U	1		
26	49072	27-28 07 2002	191	66	M	14	2.9	
27	49073	27-28 07 2002	225	119	F	6	0.2	
28	49074	27-28 07 2002	242	133		8	1.3	



Table 12. Biological data for Arctic char captured in Turnabout Lake in 2001.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
1	47395	10 08 2001	98	9	M	3		
2	47396	08 08 2001	96	10	U	3		
3	47397	08 08 2001	135	26	M	4	1.3	
4	47398	10 08 2001	178	46	M	13	2.4	
5	47399	10 08 2001	263	180	F	13	13.4	332

Table 13. Biological data for Arctic char captured in Upper Beaufort Lake in 2001.

Sample no.	Processing no.	Date (D M Y)	Fork length (mm)	Weight (g)	Sex	Age (yr+)	Gonad weight (g)	Fecundity
1	47321	10 08 2001	403	660	M	23	34.2	
2	47322	10 08 2001	463	870	M	33	3.0	
3	47323	10 08 2001	479	1090	M	23	58.4	
4	47324	10 08 2001	495	1080	F	20	101.6	1328
5	47352	10 08 2001	364	440	F	21	2.9	
6	47353	10 08 2001	372	470	F	23	4.6	
7	47354	10 08 2001	371	450	F	18	3.4	
8	47355	10 08 2001	406	600	M	23	1.8	
9	47356	10 08 2001	515	1410	M	26	53.9	
10	47357	10 08 2001	545	1700	M	25	65.6	
11	47358	10 08 2001	238	130	F	17	8.7	248
12	47359	10 08 2001	289	210	M	8	0.1	
13	47360	10 08 2001	236	110	F	7	0.3	
14	47361	10 08 2001	187	55	F	5	0.1	
15	47362	10 08 2001	224	88	F	10	0.3	
16	47363	10 08 2001	165	48	M	10	3.4	
17	47364	10 08 2001	191	61	M	9	0.2	
18	47365	10 08 2001	155	32	M	4		
19	47366	10 08 2001	442	700	M	22	1.7	
20	47367	10 08 2001	415	680	M	21	1.8	
21	47368	10 08 2001	108	109	M			
22	47369	10 08 2001	115	14	U	3		
23	47370	10 08 2001	105	12	U	3		

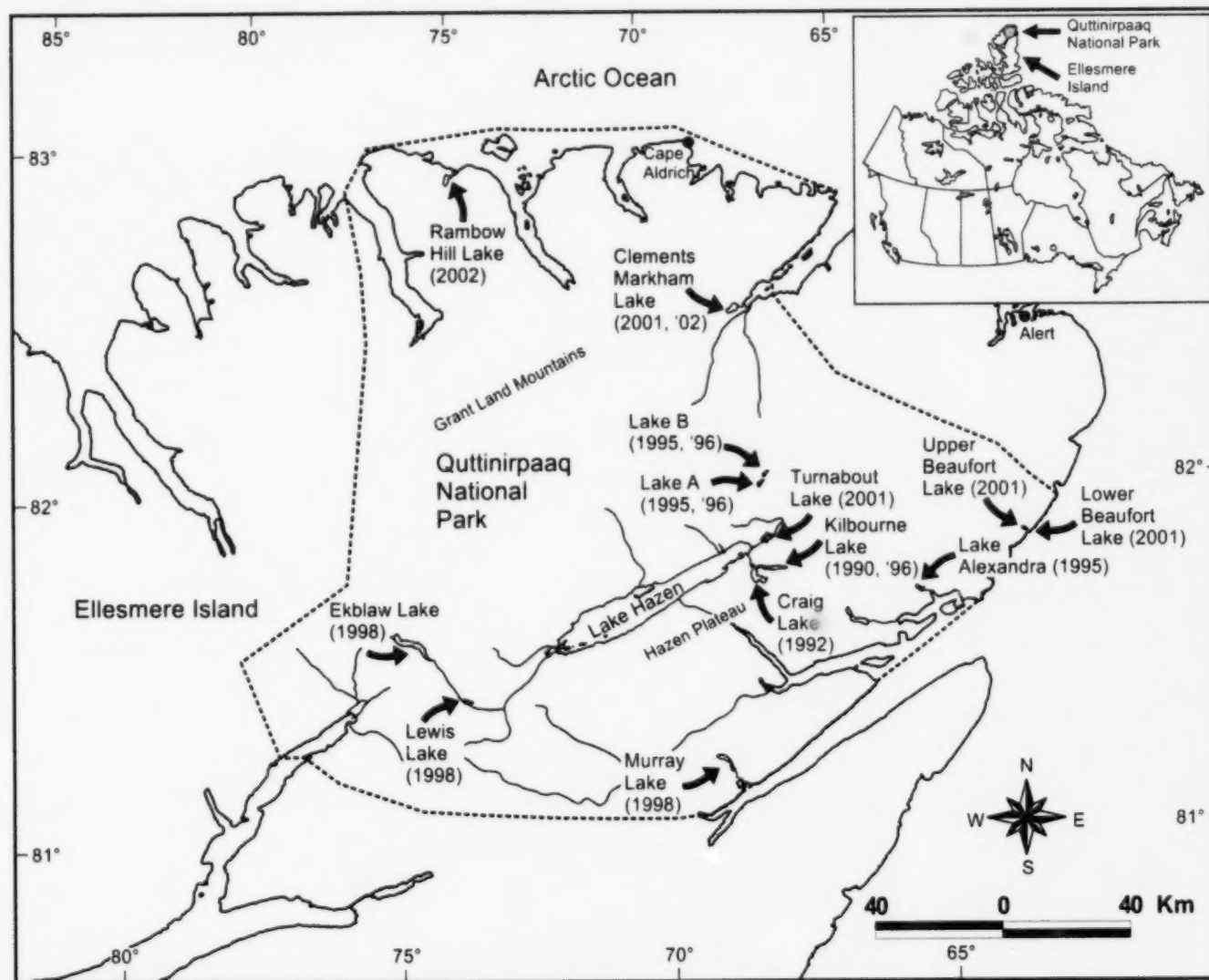


Figure 1. Map of Quttinirpaaq National Park (within dashed line), Nunavut showing collection locations for Arctic char (indicated by arrows) and dates (year) fish were collected.

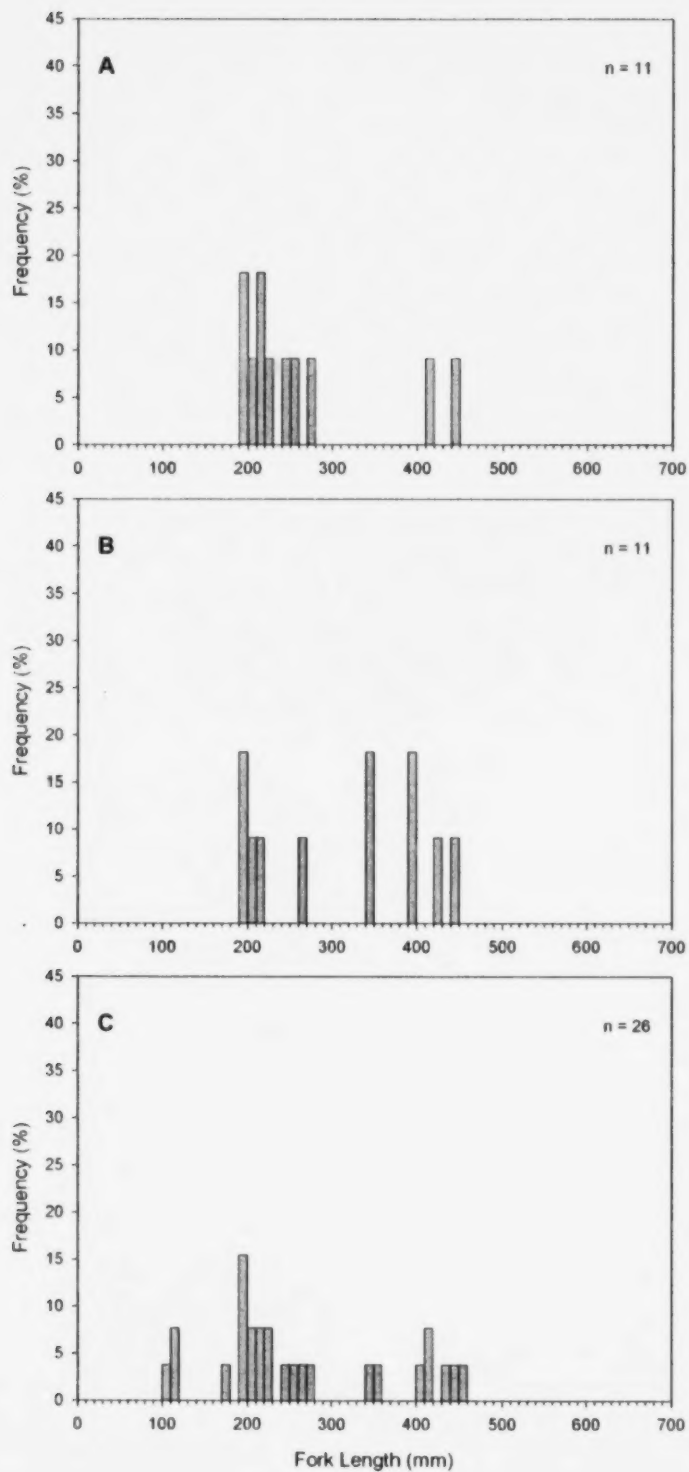


Figure 2. Length-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Clements Markham Lake in 2001 and 2002.

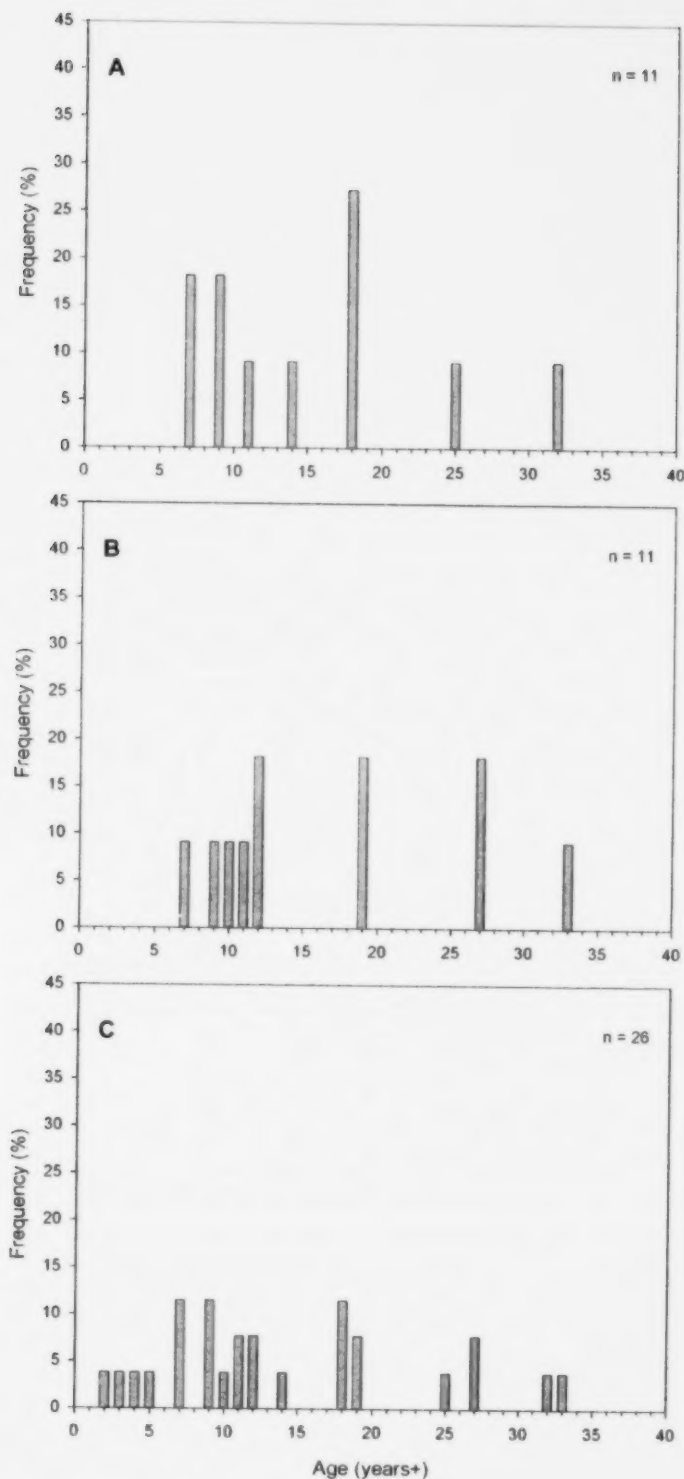


Figure 3. Age-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Clements Markham Lake in 2001 and 2002.

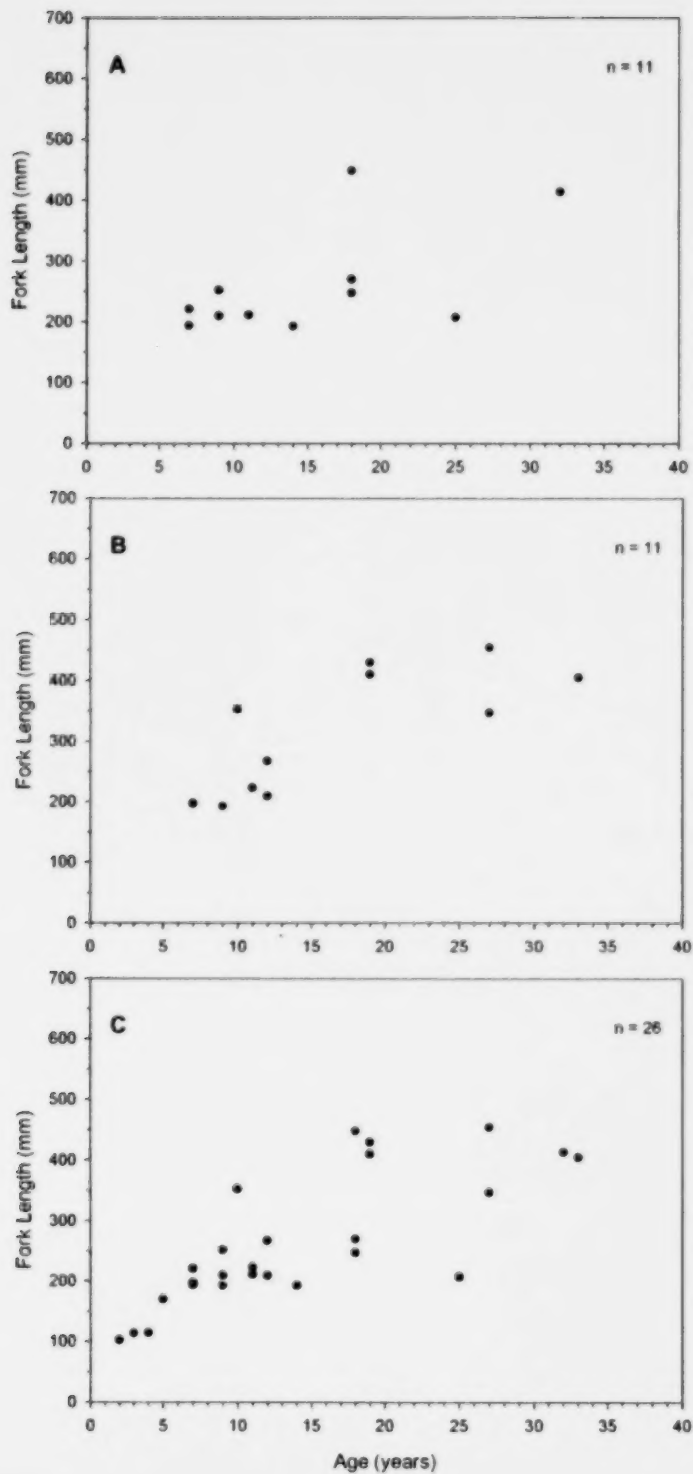


Figure 4. Relationship between fork length and age for (A) male, (B) female and (C) all Arctic char captured in Clements Markham Lake in 2001 and 2002.

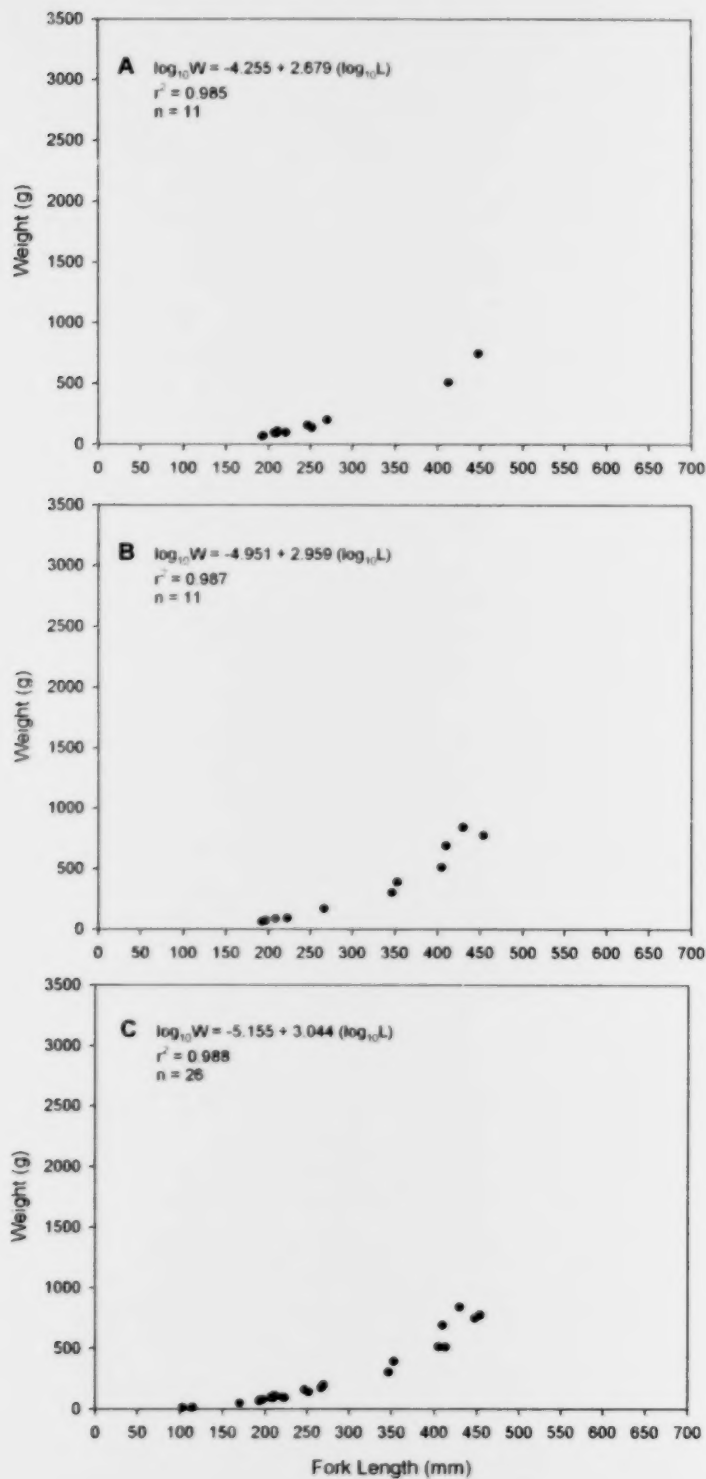


Figure 5. Relationship between weight and fork length for (A) male, (B) female and (C) all Arctic char captured in Clements Markham Lake in 2001 and 2002.

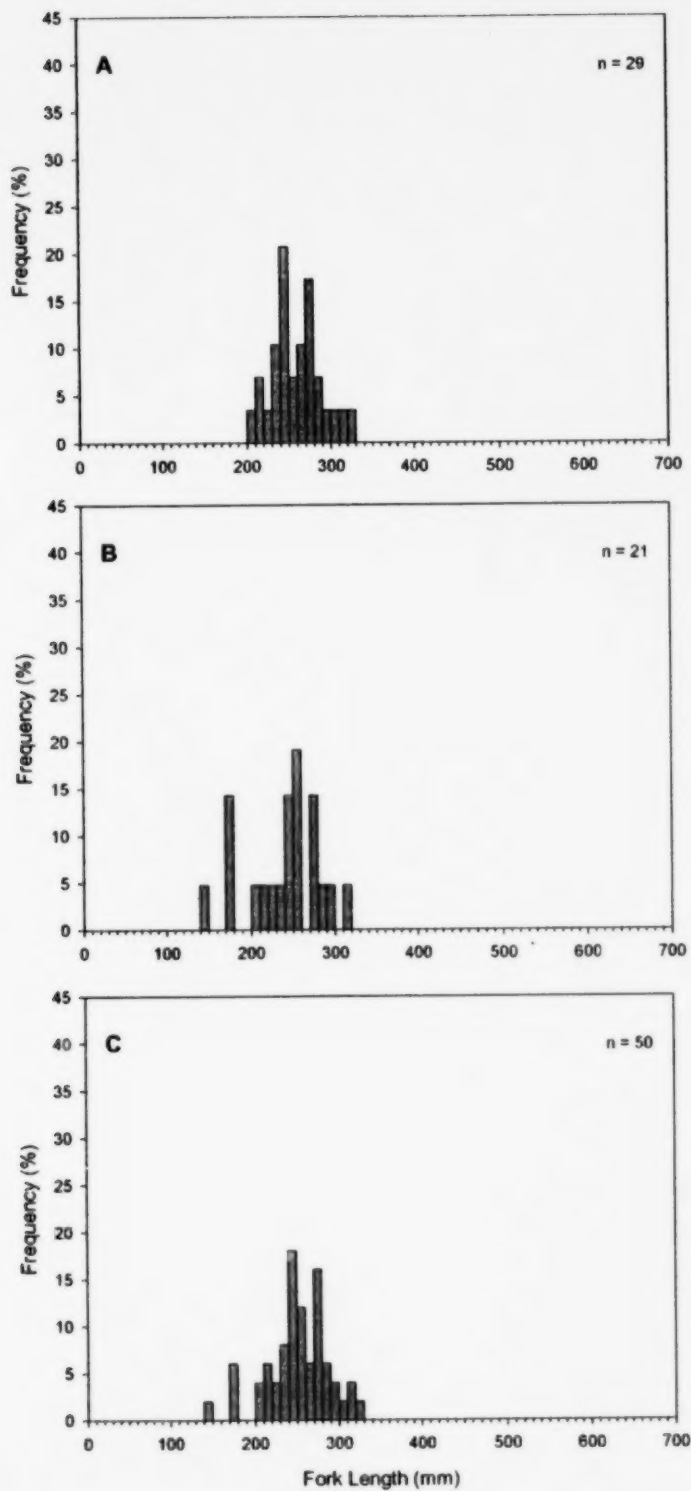


Figure 6. Length-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Craig Lake in 1992.



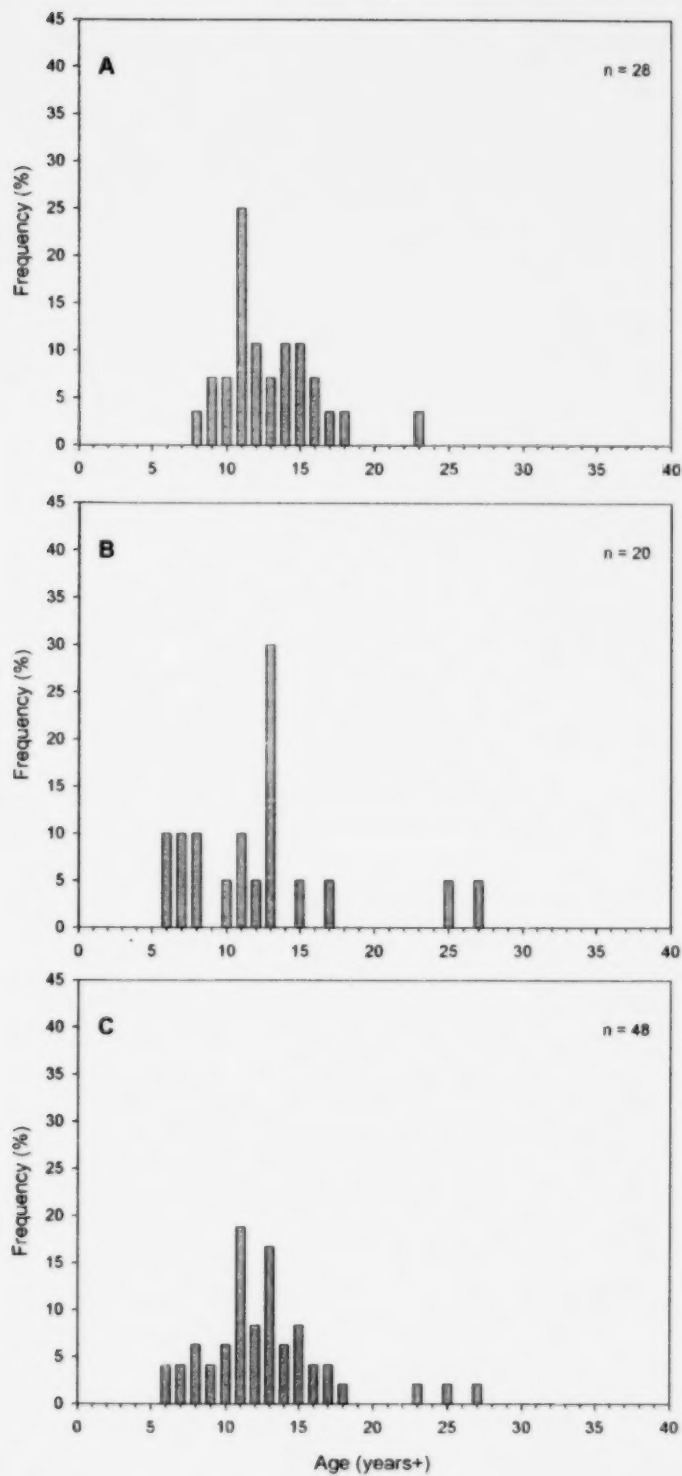


Figure 7. Age-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Craig Lake in 1992.

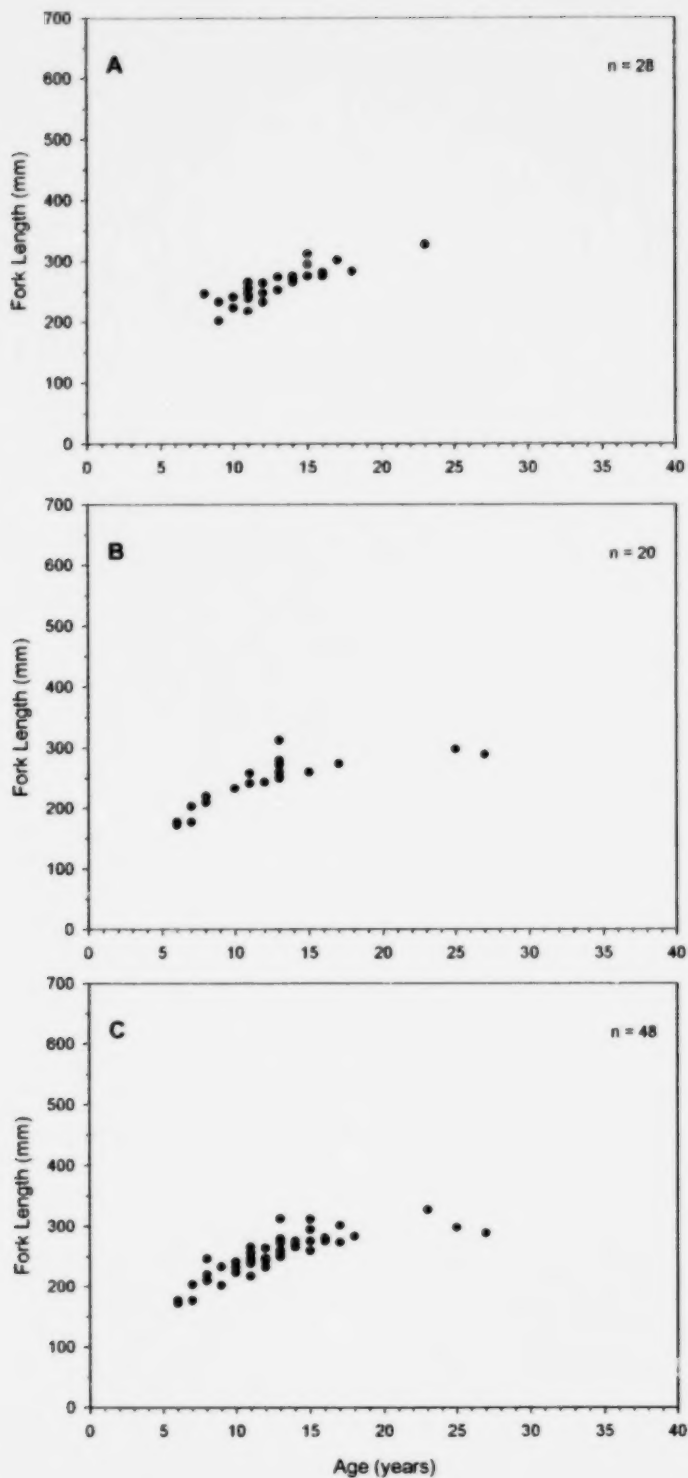


Figure 8. Relationship between fork length and age for (A) male, (B) female and (C) all Arctic char captured in Craig Lake in 1992.

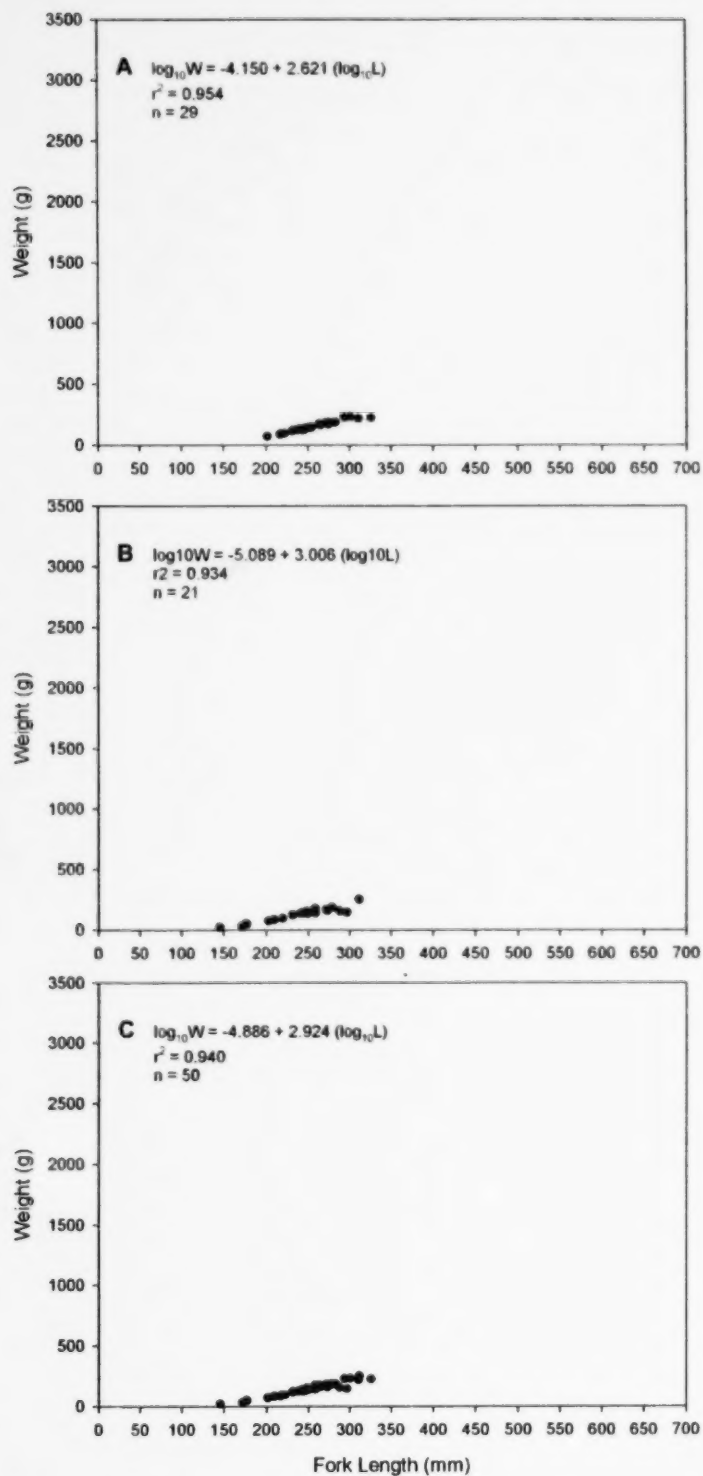


Figure 9. Relationship between weight and fork length for (A) male, (B) female and (C) all Arctic char captured in Craig Lake in 1992.

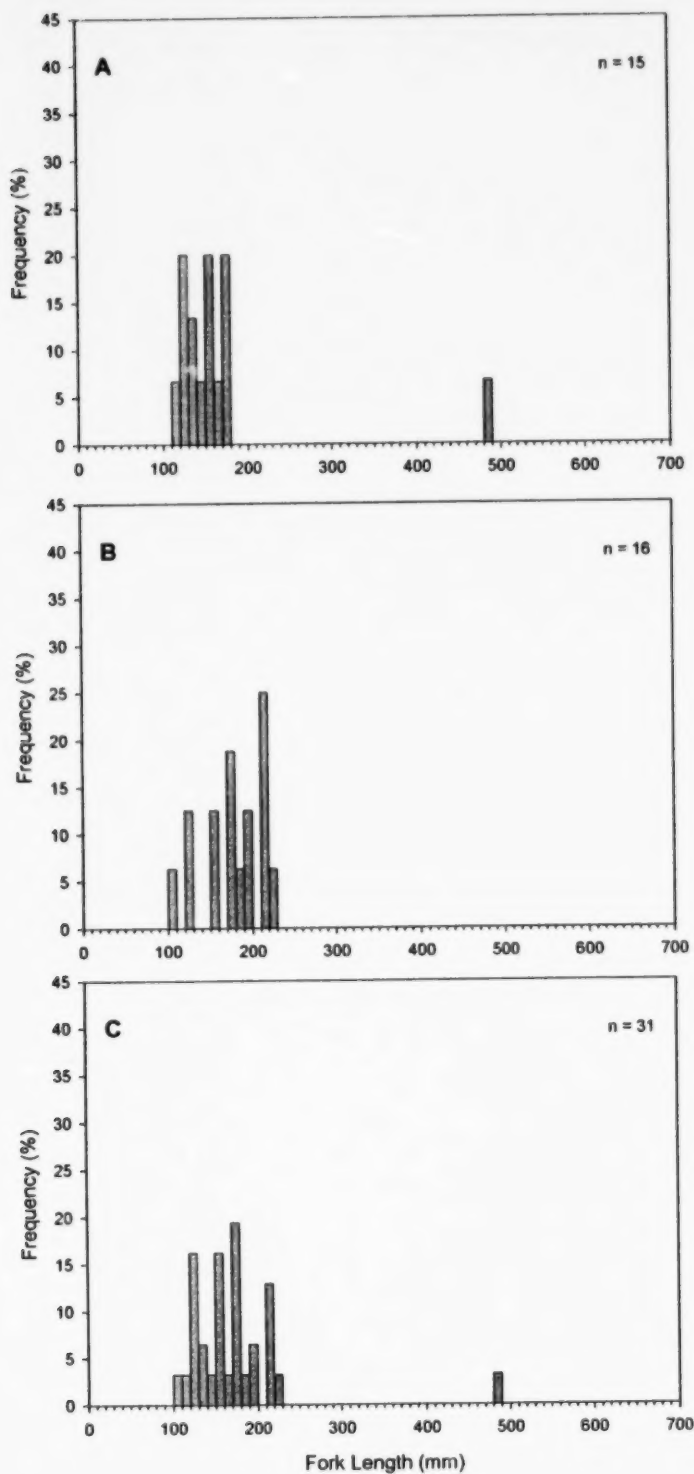


Figure 10. Length-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Ekblaw Lake in 1998.

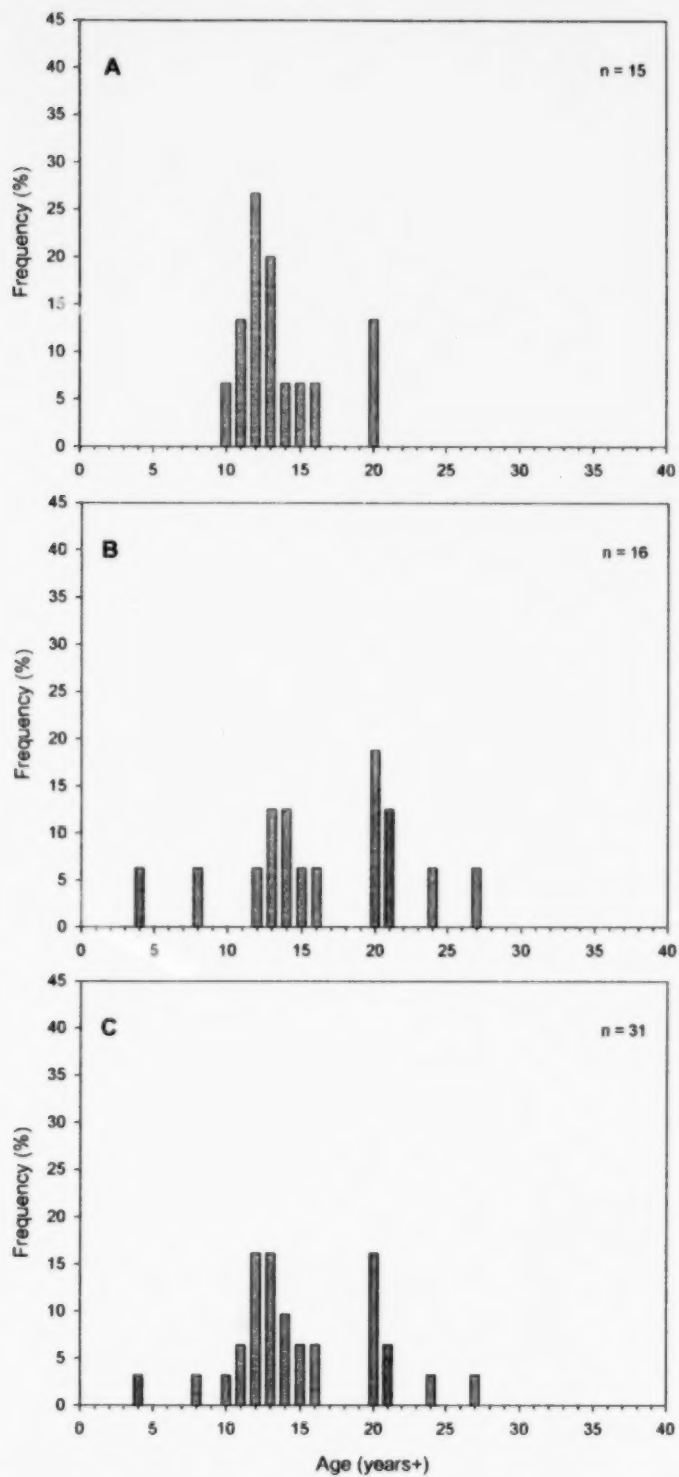


Figure 11. Age-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Ekblaw Lake in 1998.

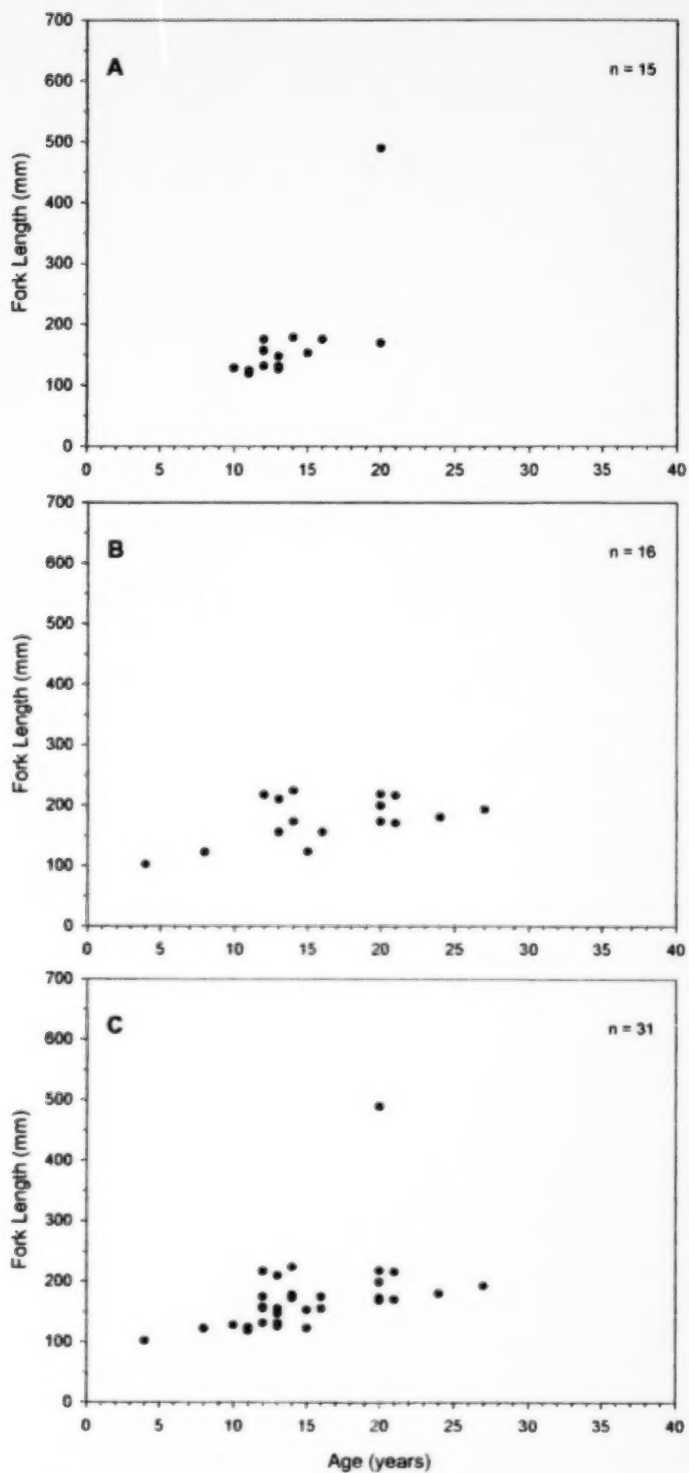


Figure 12. Relationship between fork length and age for (A) male, (B) female and (C) all Arctic char captured in Ekblaw Lake in 1998.

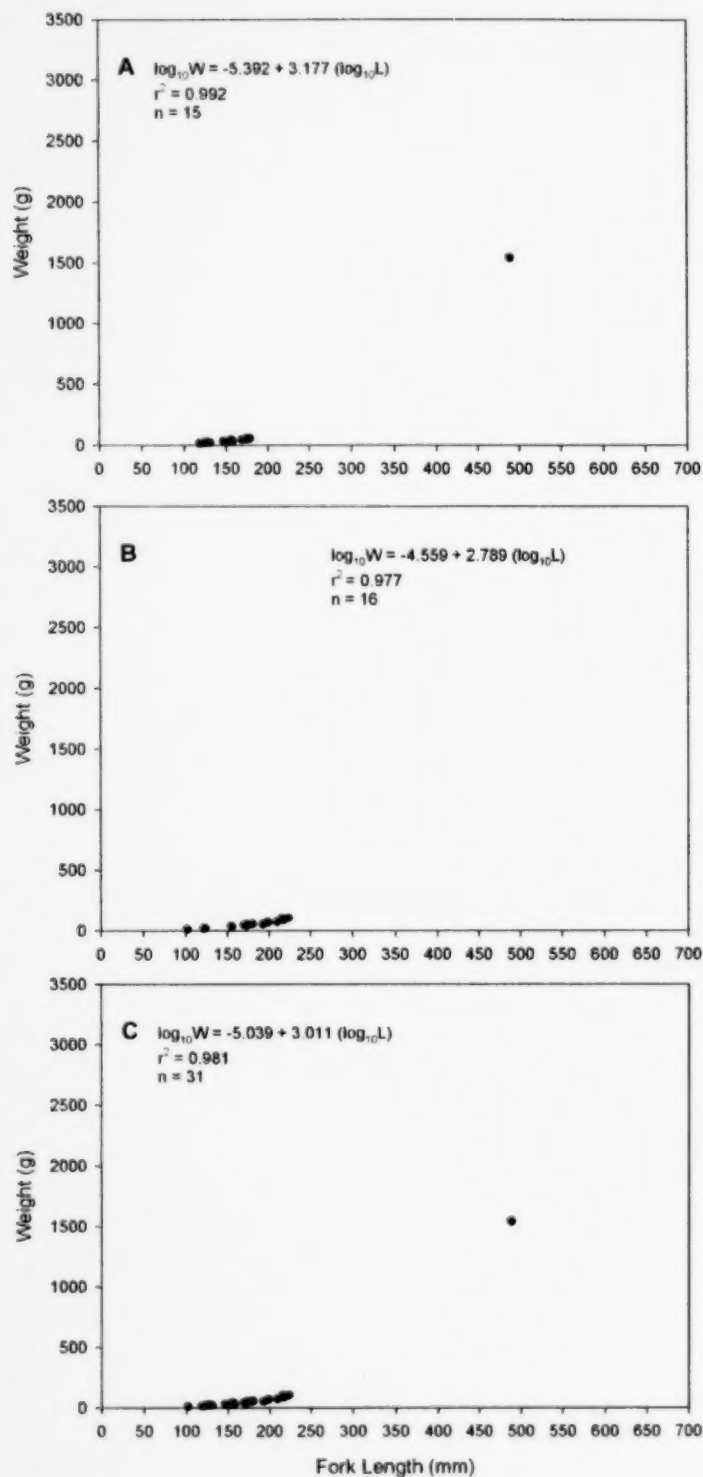


Figure 13. Relationship between weight and fork length for (A) male, (B) female and (C) all Arctic char captured in Ekblaw Lake in 1998.

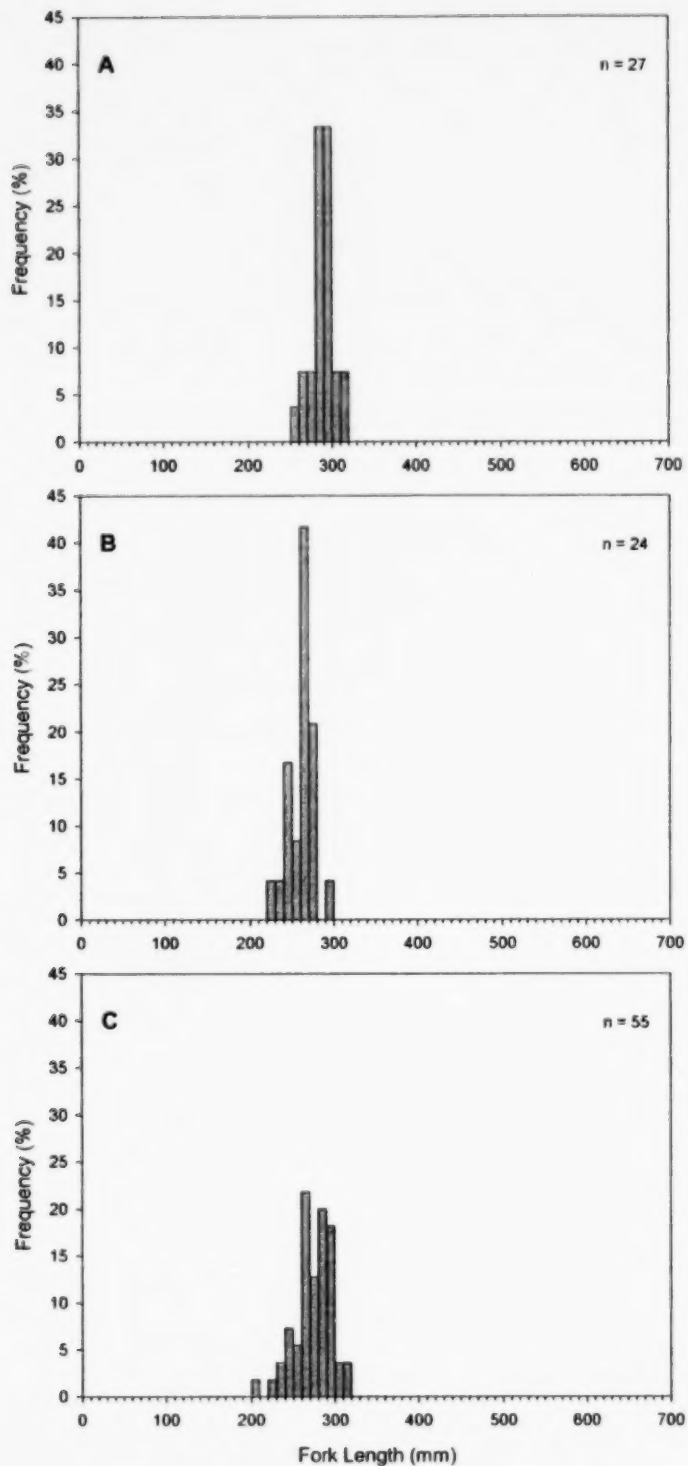


Figure 14. Length-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Kilbourne Lake in 1990 and 1996.



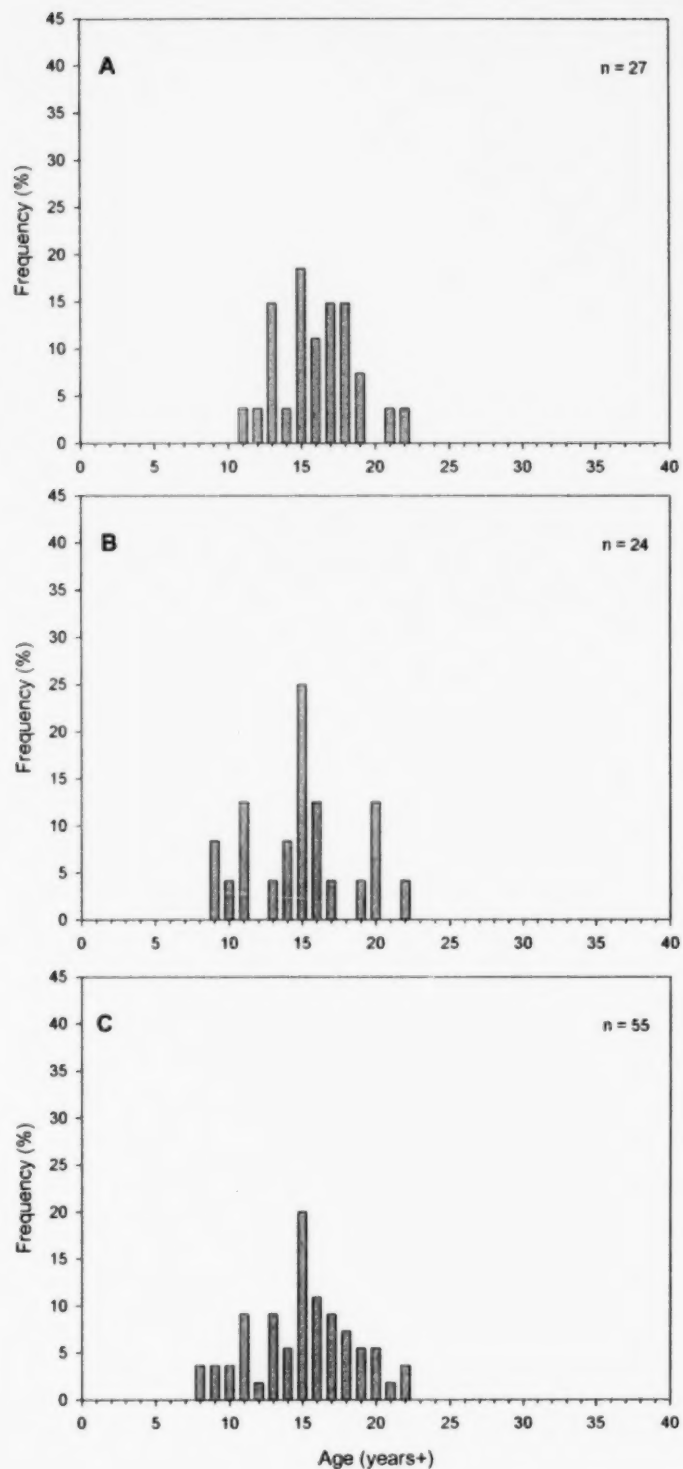


Figure 15. Age-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Kilbourne Lake in 1990 and 1996.

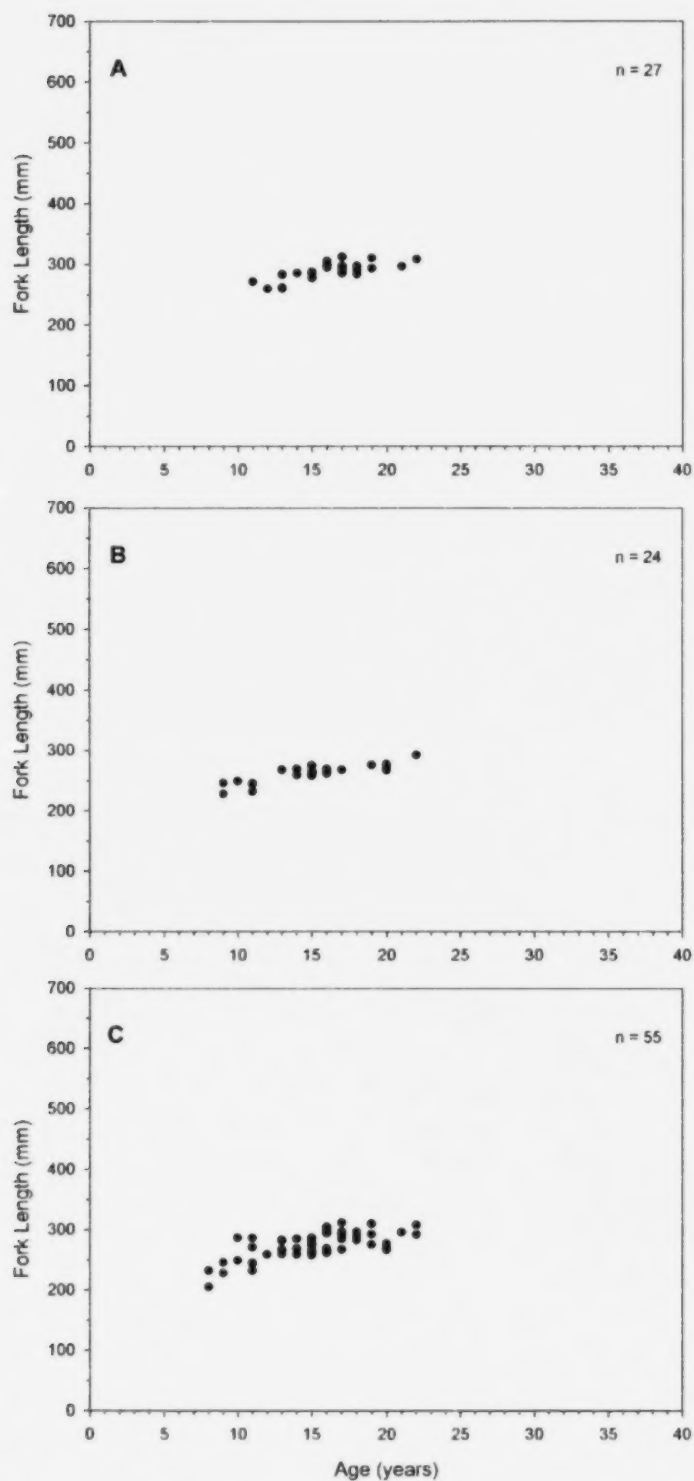


Figure 16. Relationship between fork length and age for (A) male, (B) female and (C) all Arctic char captured in Kilbourne Lake in 1990 and 1996.

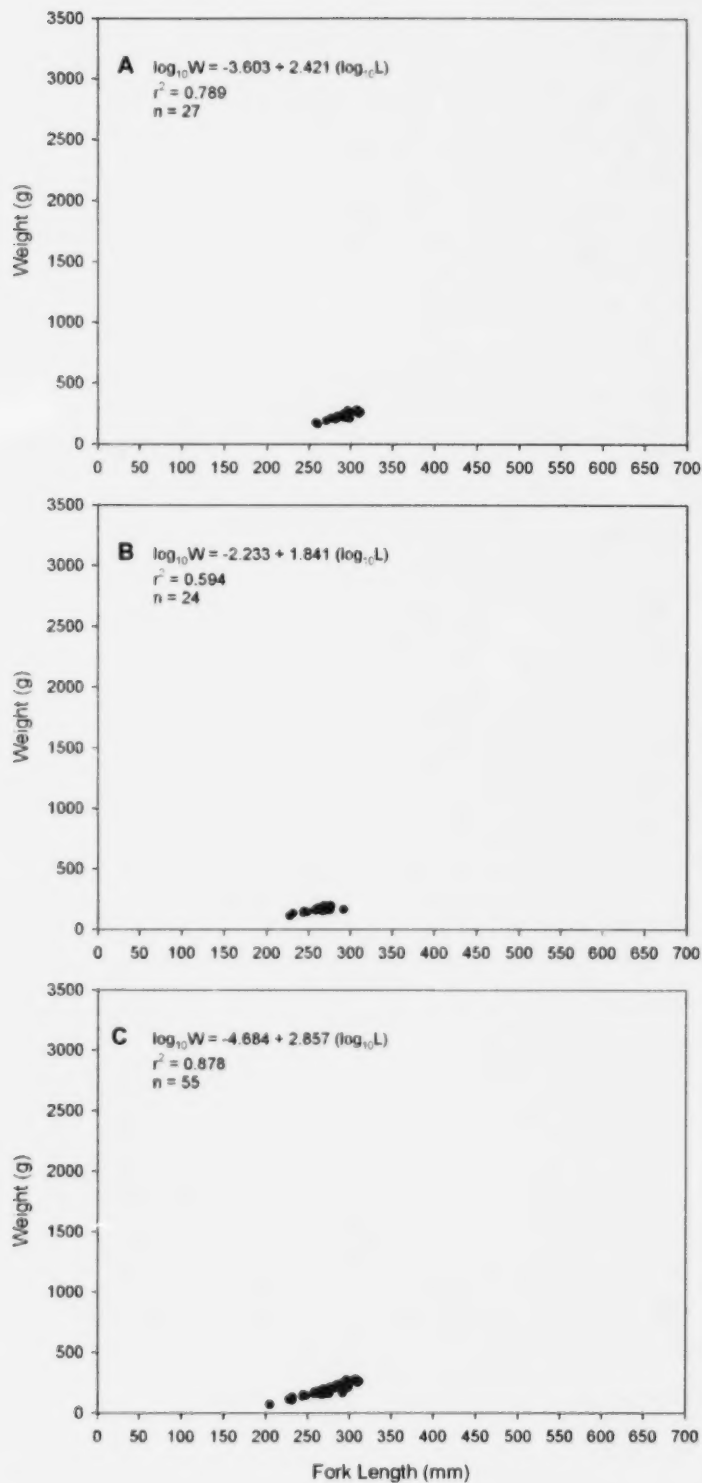


Figure 17. Relationship between weight and fork length for (A) male, (B) female and (C) all Arctic char captured in Kilbourne Lake in 1990 and 1996.

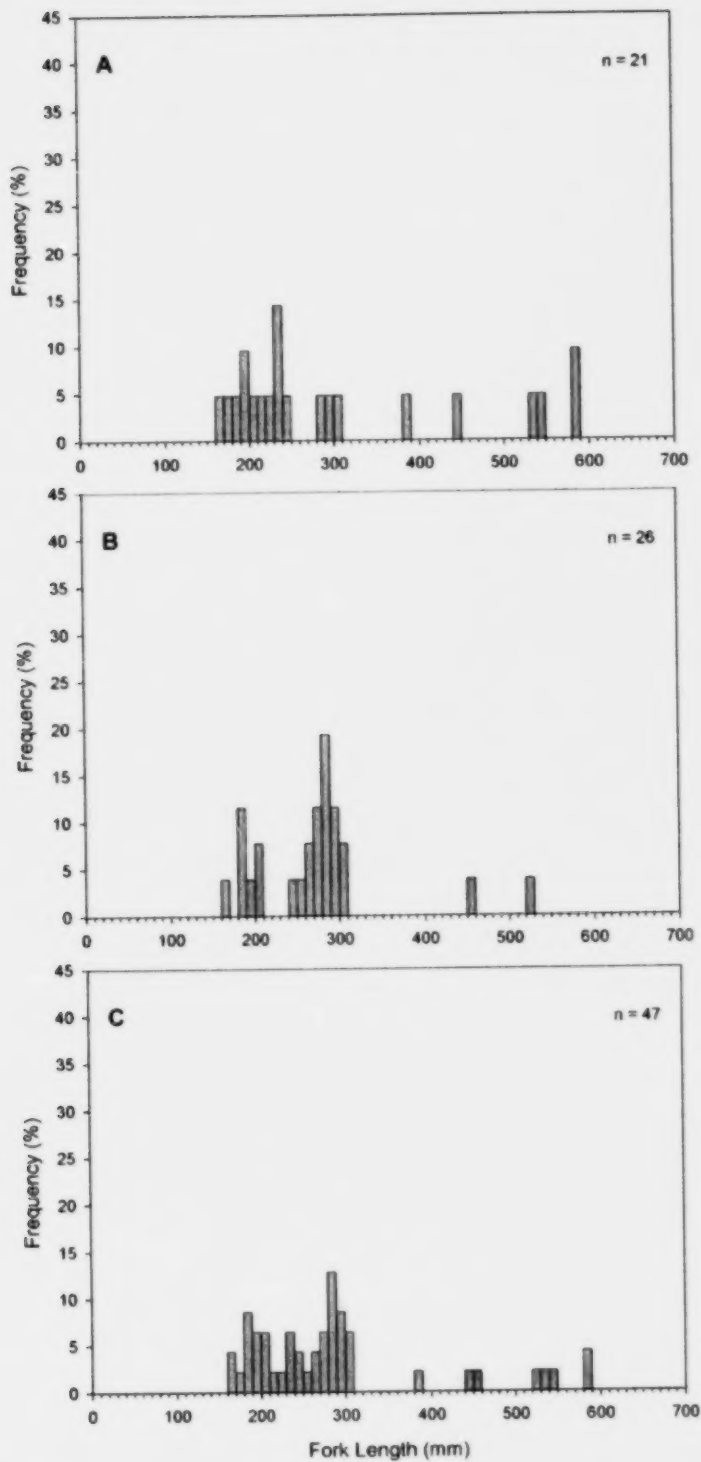


Figure 18. Length-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Lake A in 1995 and 1996.

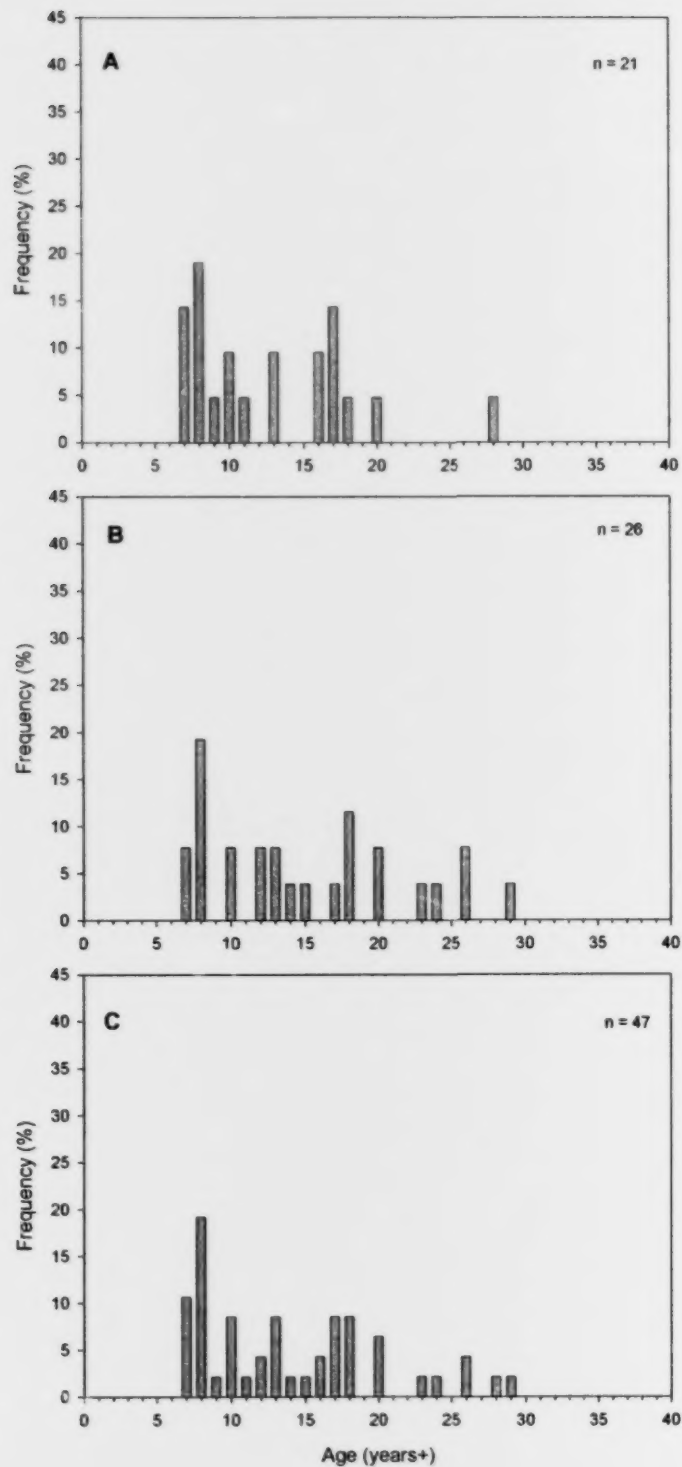


Figure 19. Age-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Lake A in 1995 and 1996.

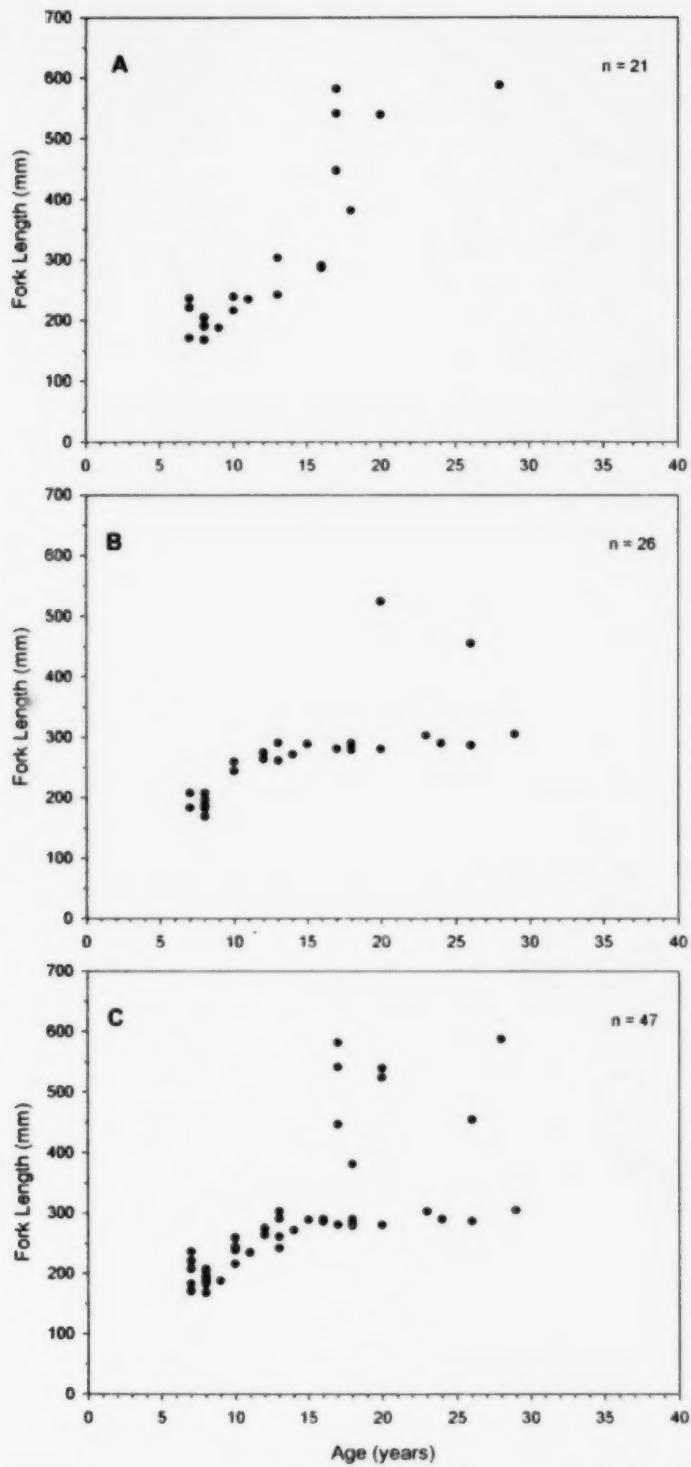


Figure 20. Relationship between fork length and age for (A) male, (B) female and (C) all Arctic char captured in Lake A in 1995 and 1996.

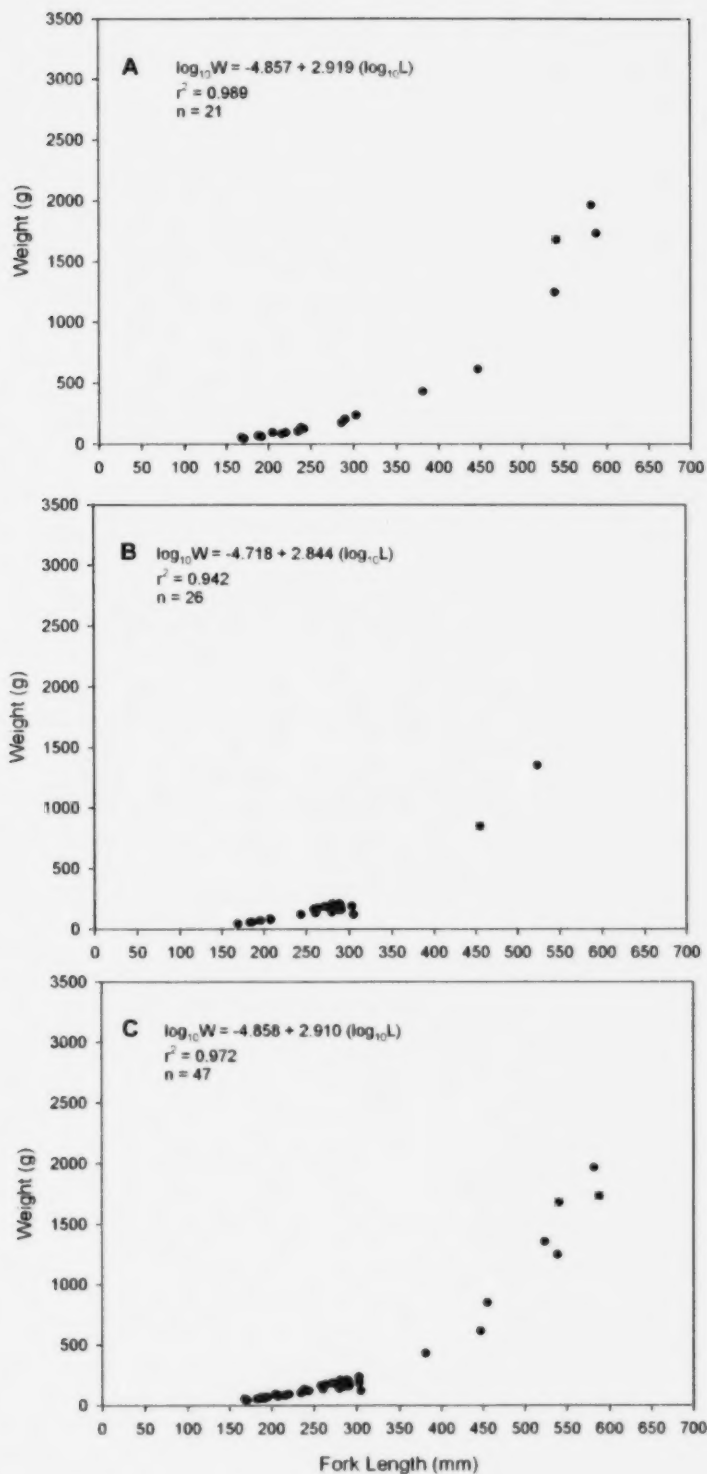


Figure 21. Relationship between weight and fork length for (A) male, (B) female and (C) all Arctic char captured in Lake A in 1995 and 1996.

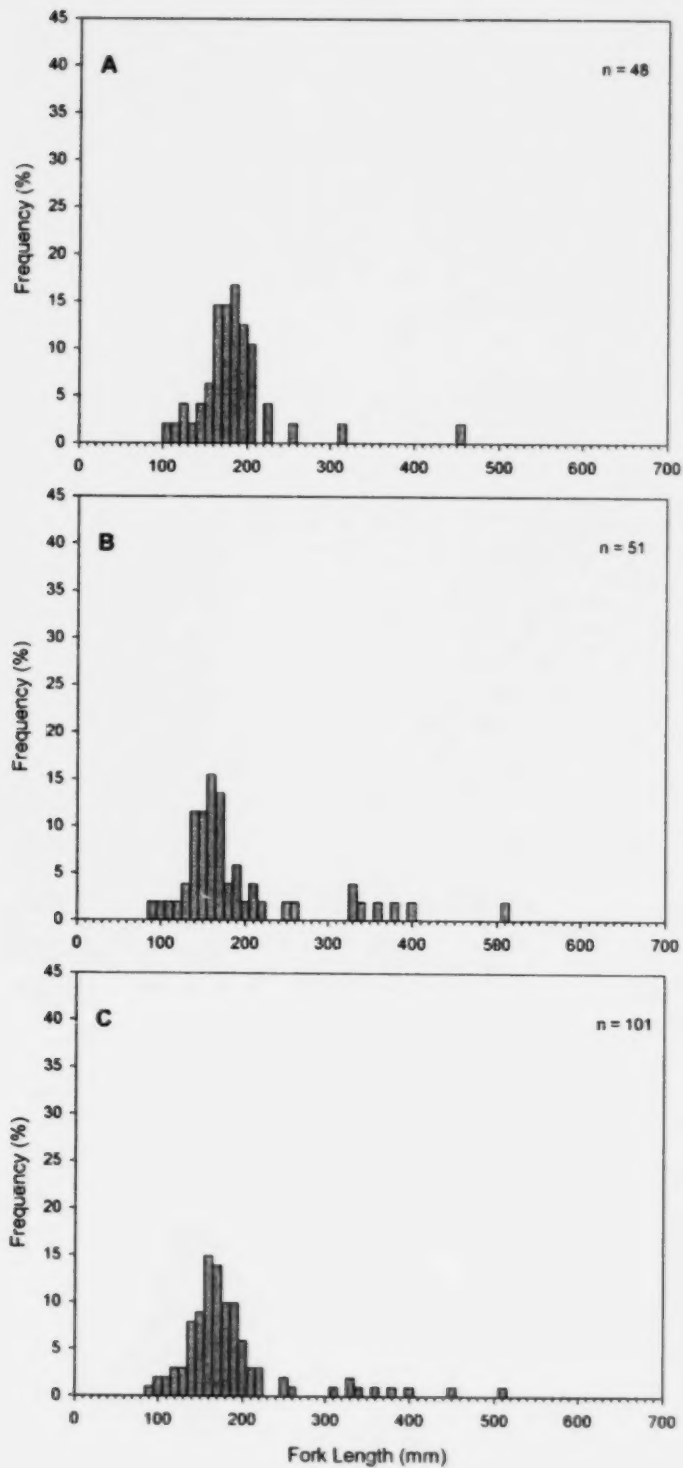


Figure 22. Length-frequency distributions for (A) male, (B) female and (C) all char captured in Lake Alexandra in 1995.



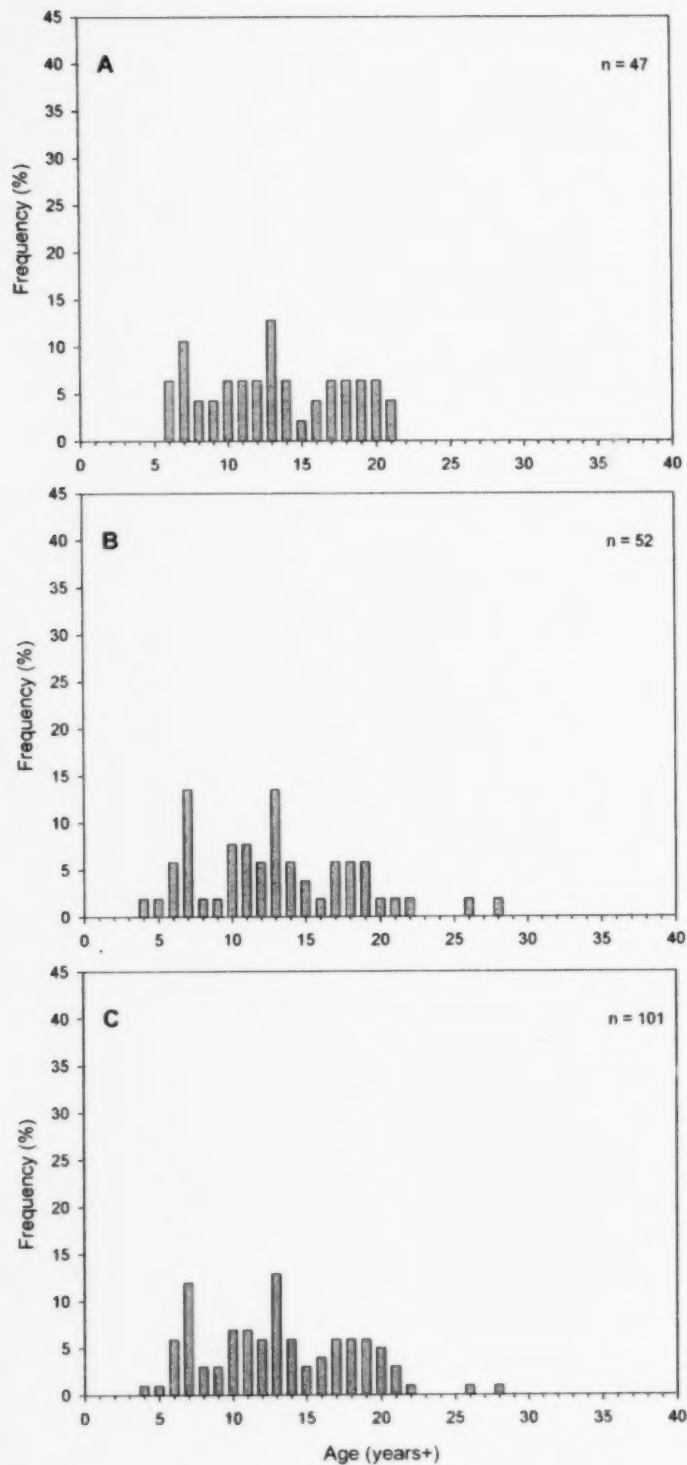


Figure 23. Age-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Lake Alexandra in 1995.

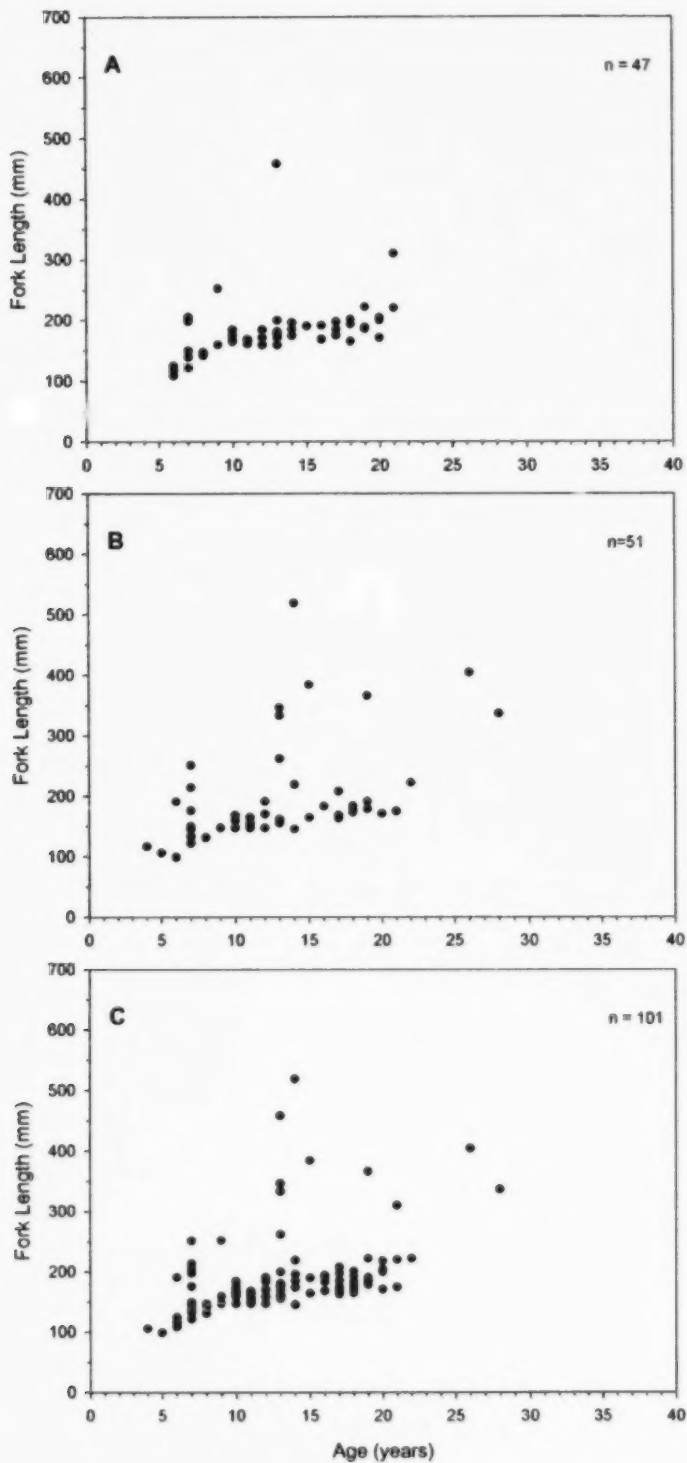


Figure 24. Relationship between fork length and age for (A) male, (B) female and (C) all Arctic char captured in Lake Alexandra in 1995.

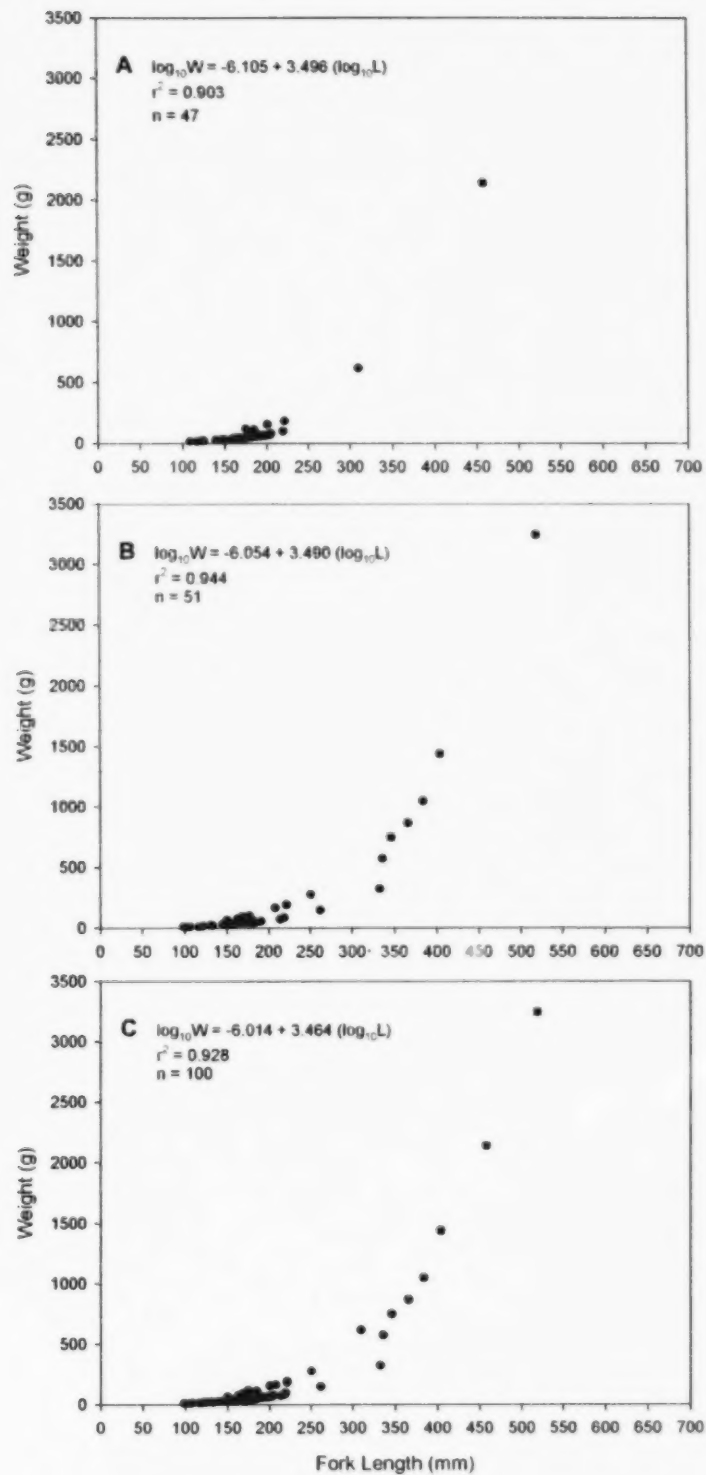


Figure 25. Relationship between weight and fork length for (A) male, (B) female and (C) all Arctic char captured in Lake Alexandra in 1995.

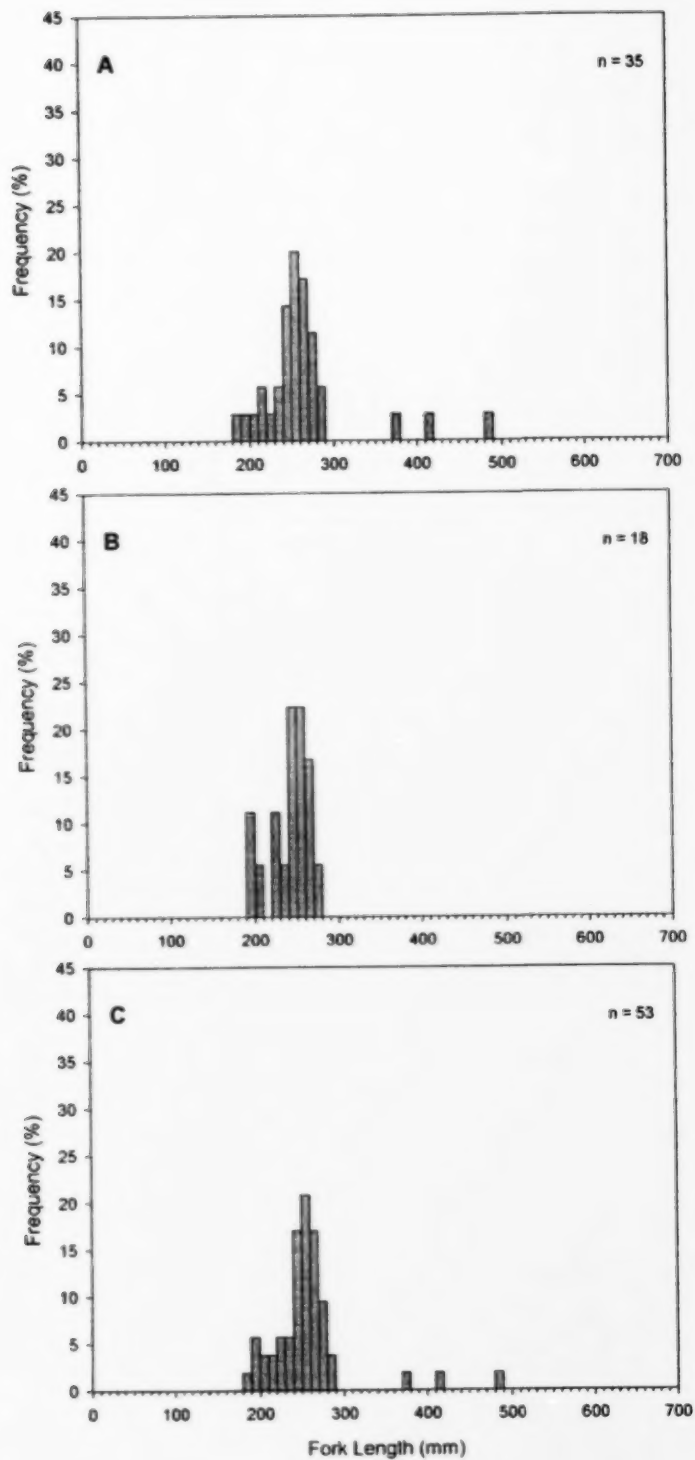


Figure 26. Length-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Lake B in 1995 and 1996.

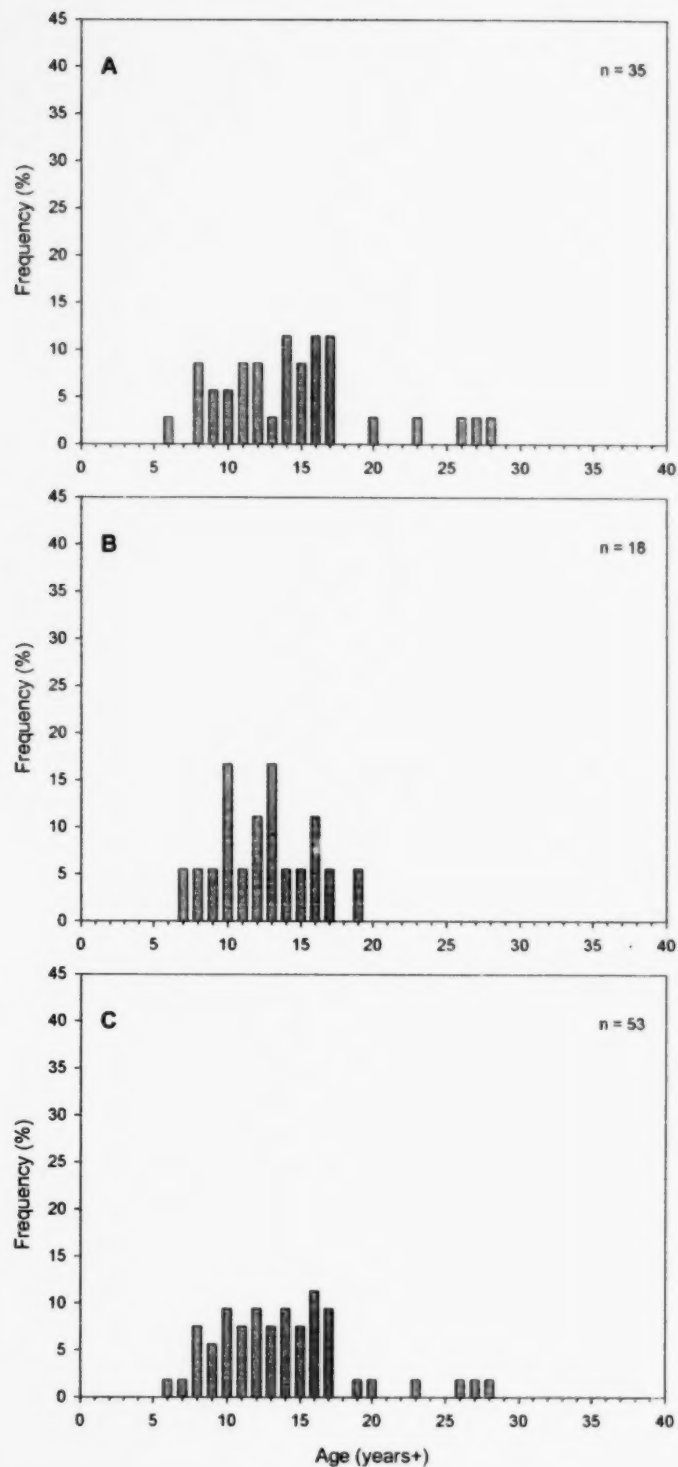


Figure 27. Age-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Lake B in 1995 and 1996.

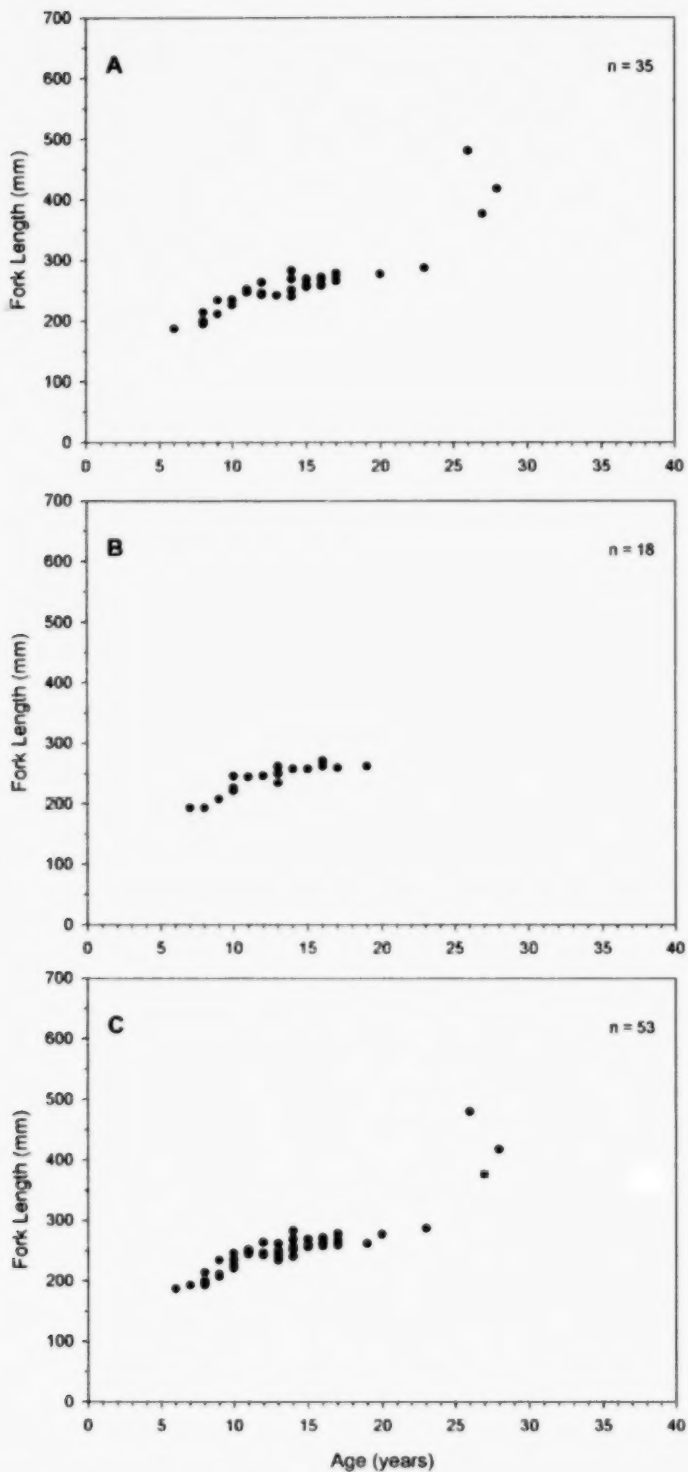


Figure 28. Relationship between fork length and age for (A) male, (B) female and (C) all Arctic char captured in Lake B in 1995 and 1996.

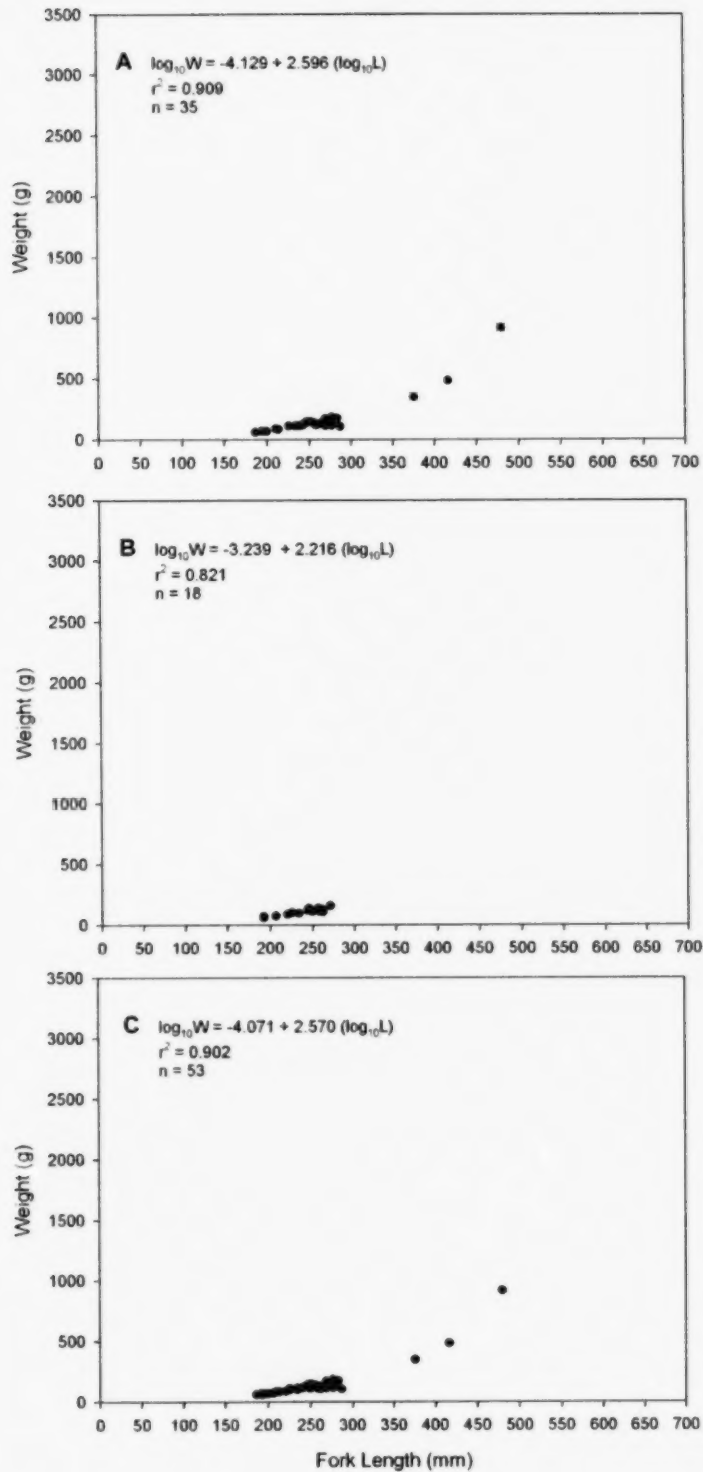


Figure 29. Relationship between weight and fork length for (A) male, (B) female and (C) all Arctic char captured in Lake B in 1995 and 1996.

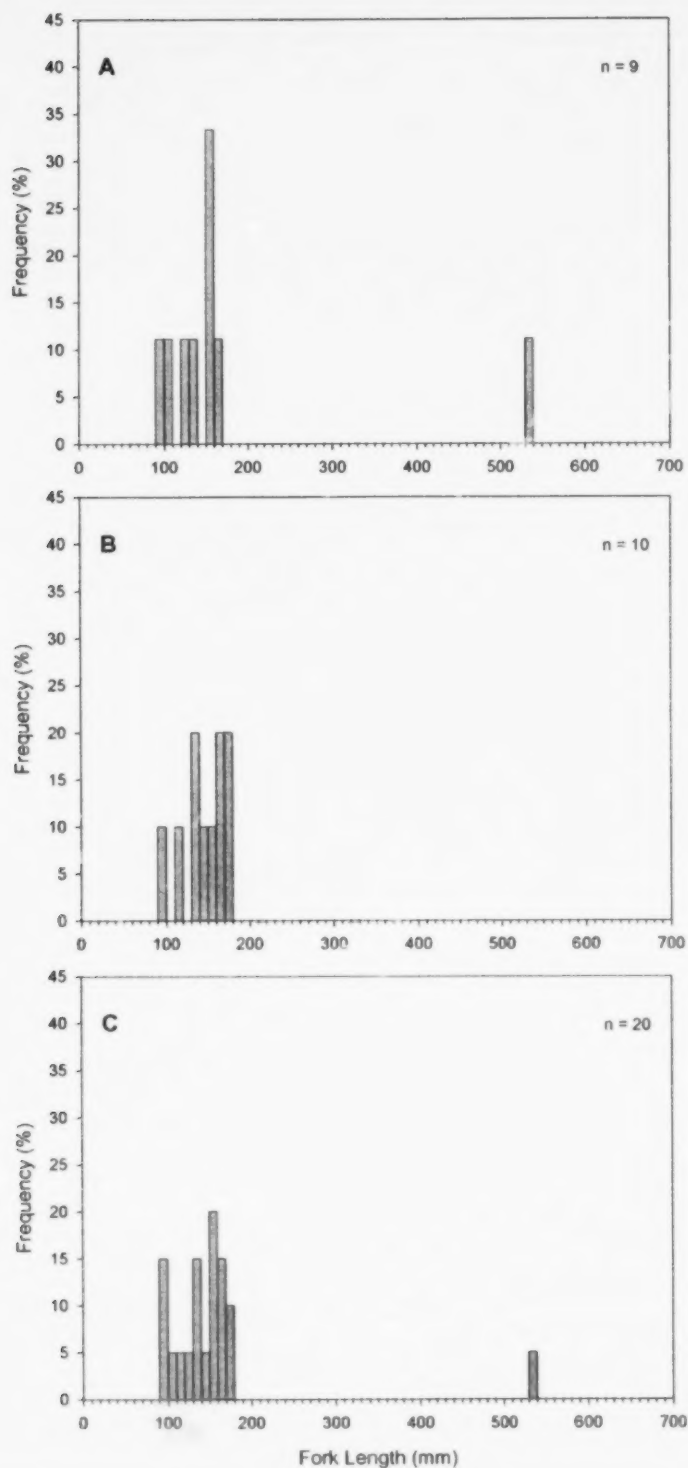


Figure 30. Length-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Lewis Lake in 1998.



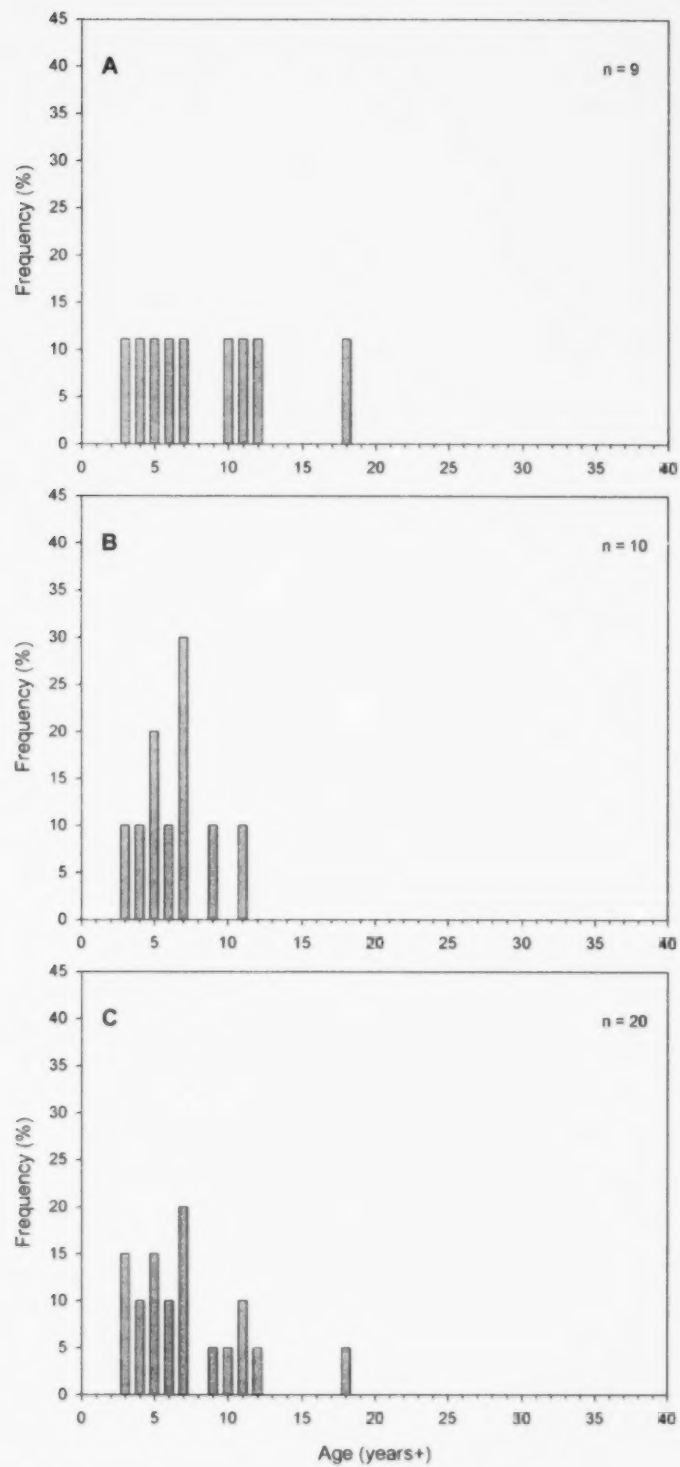


Figure 31. Age-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Lewis Lake in 1998.

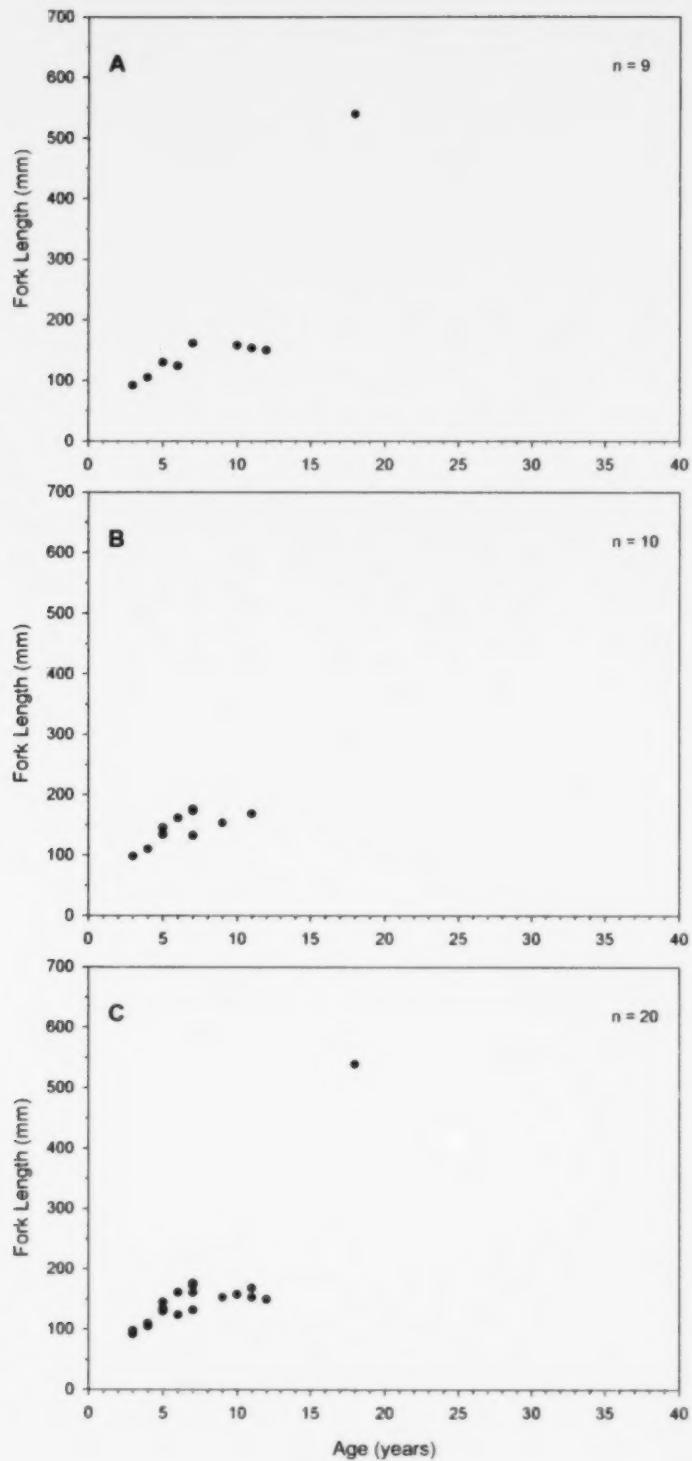


Figure 32. Relationship between fork length and age for (A) male, (B) female and (C) all Arctic char captured in Lewis Lake in 1998.

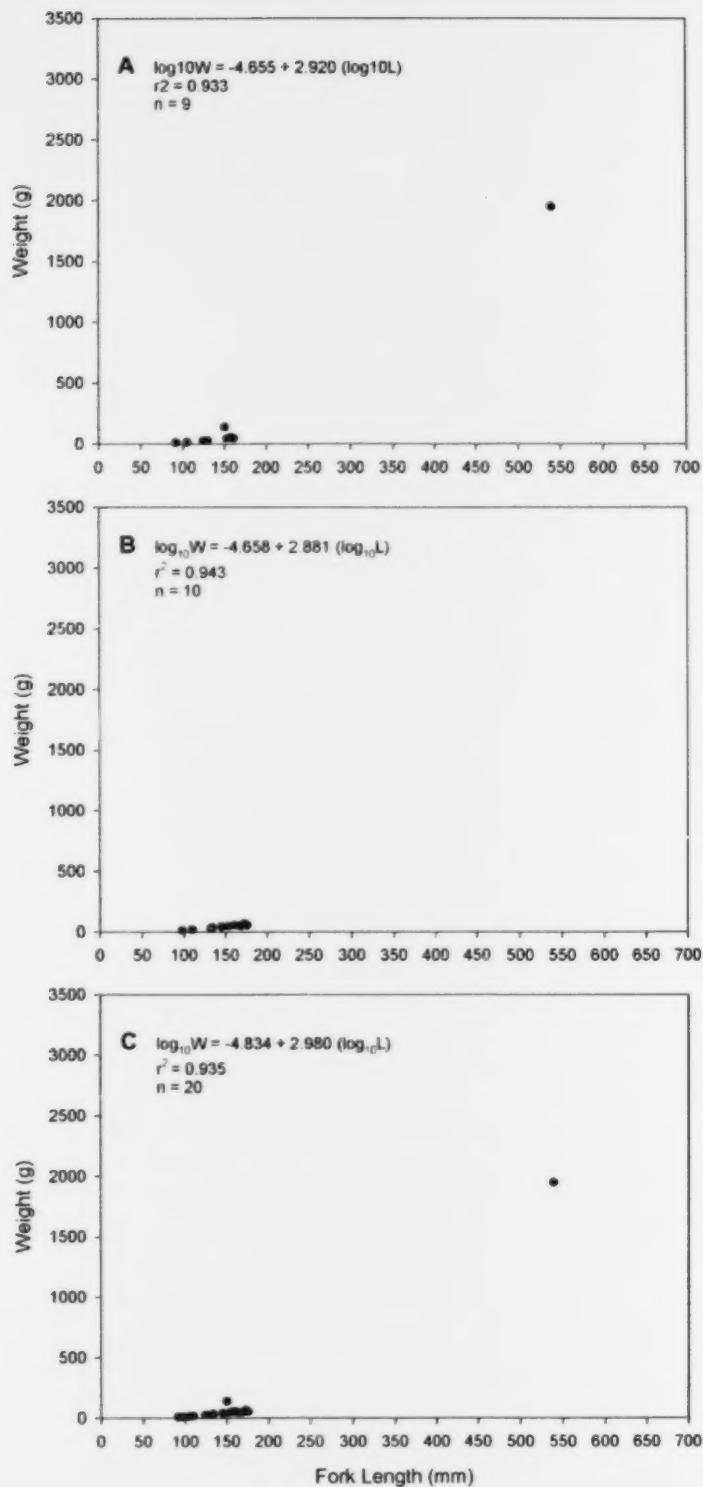


Figure 33. Relationship between weight and fork length for (A) male, (B) female and (C) all Arctic char captured in Lewis Lake in 1998.

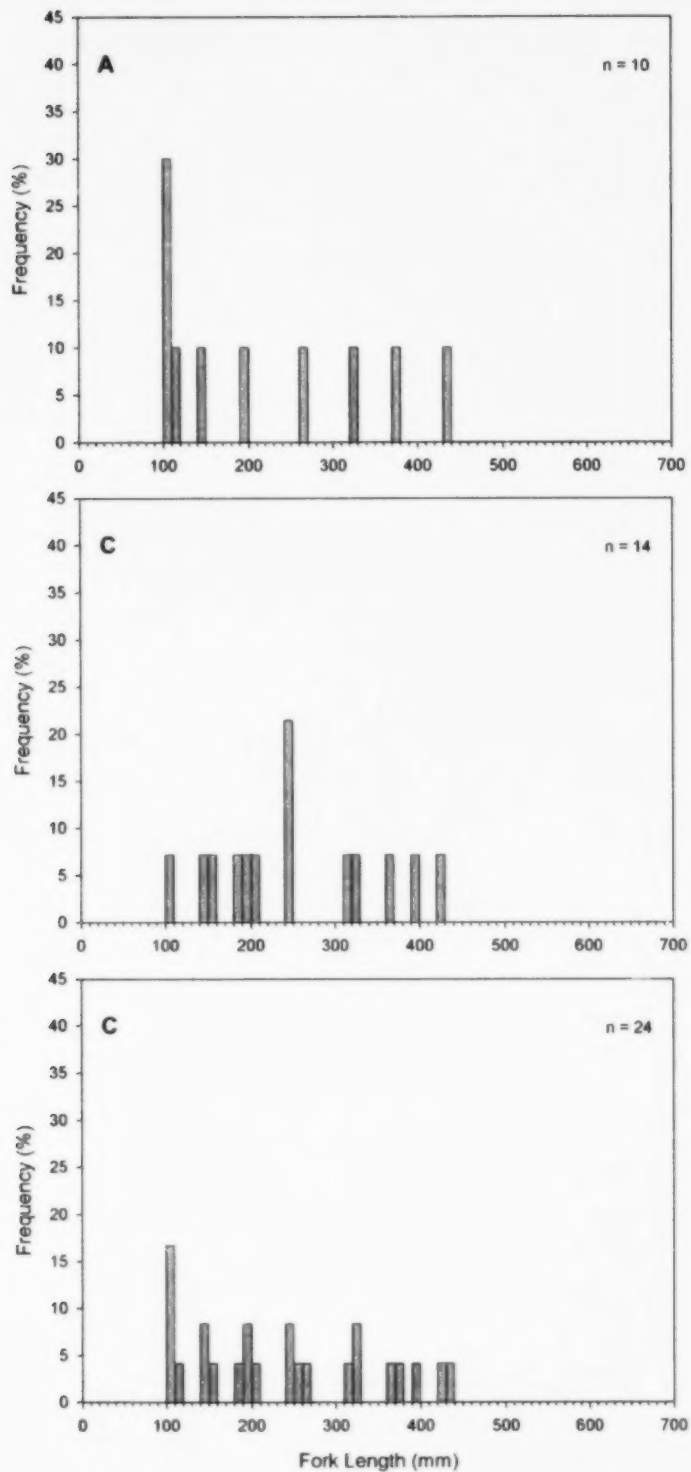


Figure 34. Length-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Lower Beaufort Lake in 2001.

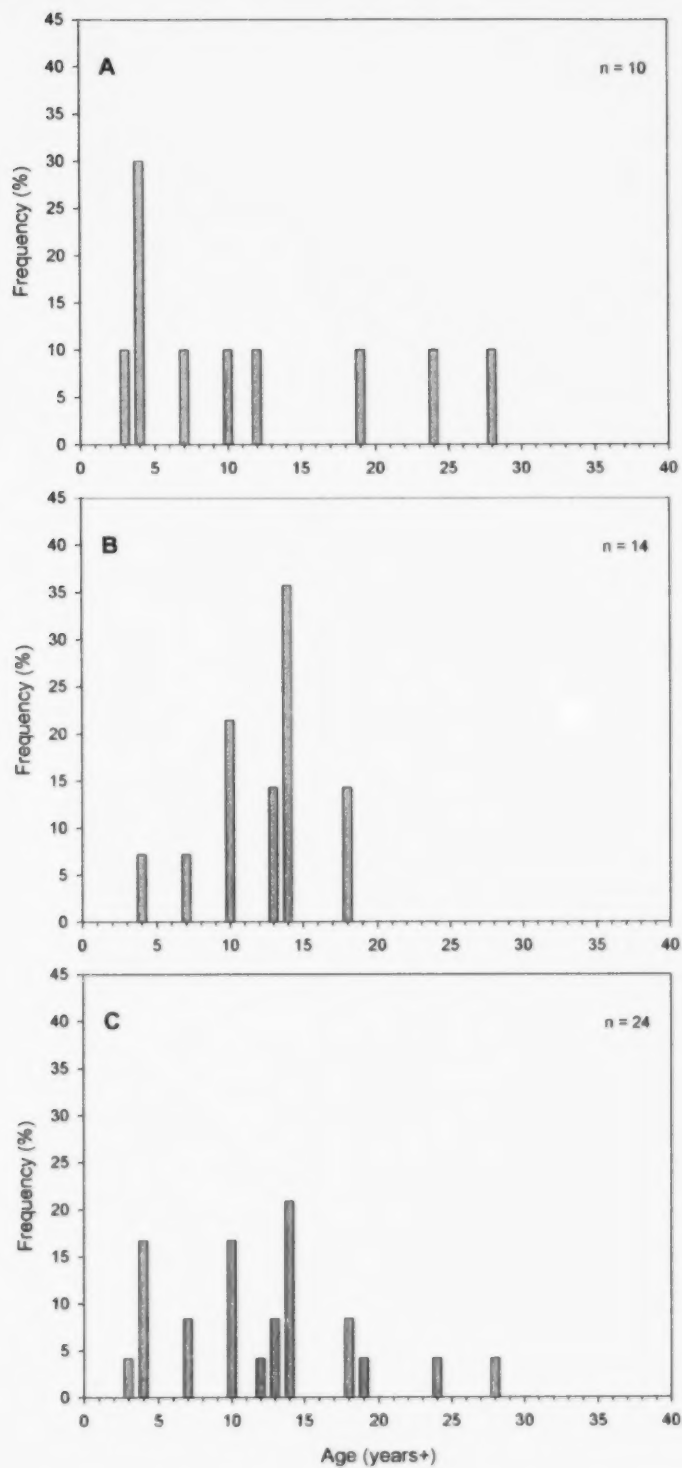


Figure 35. Age-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Lower Beaufort Lake in 2001.

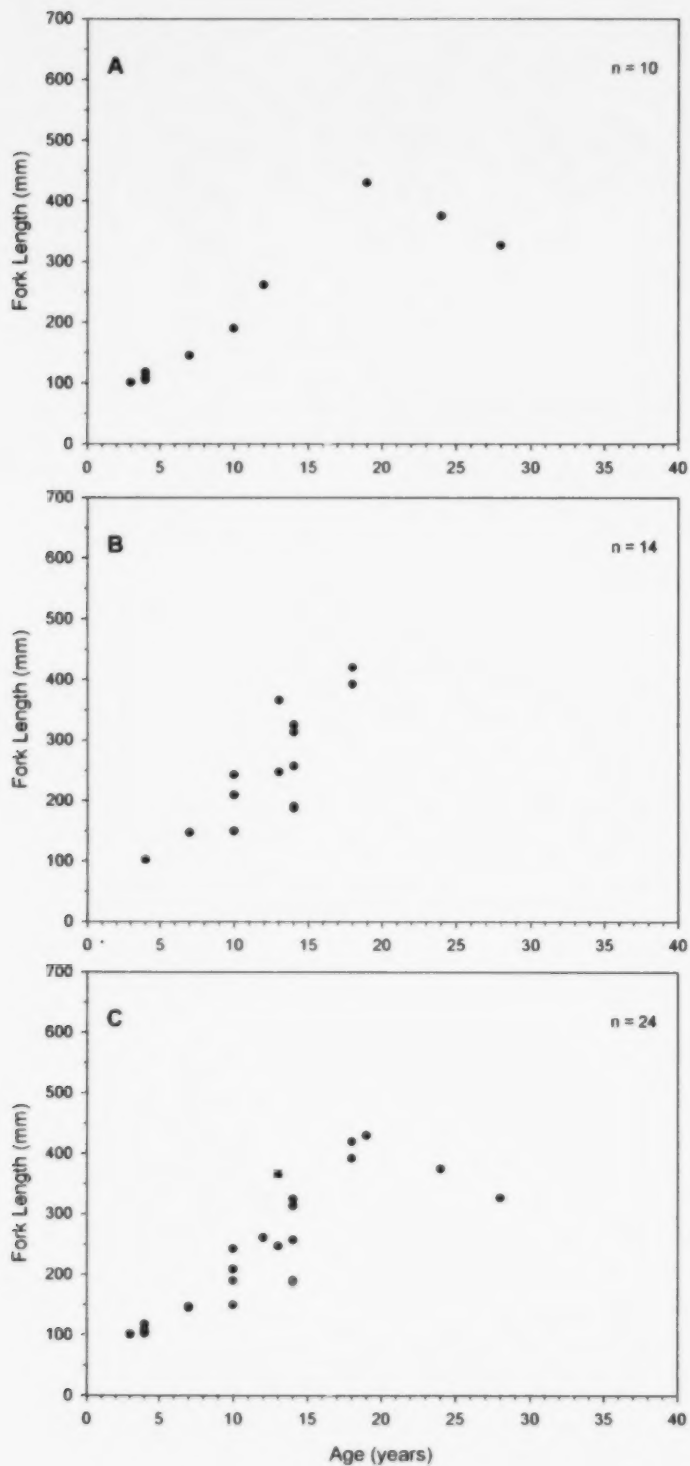


Figure 36. Relationship between fork length and age for (A) male, (B) female and (C) all Arctic char captured in Lower Beaufort Lake in 2001.

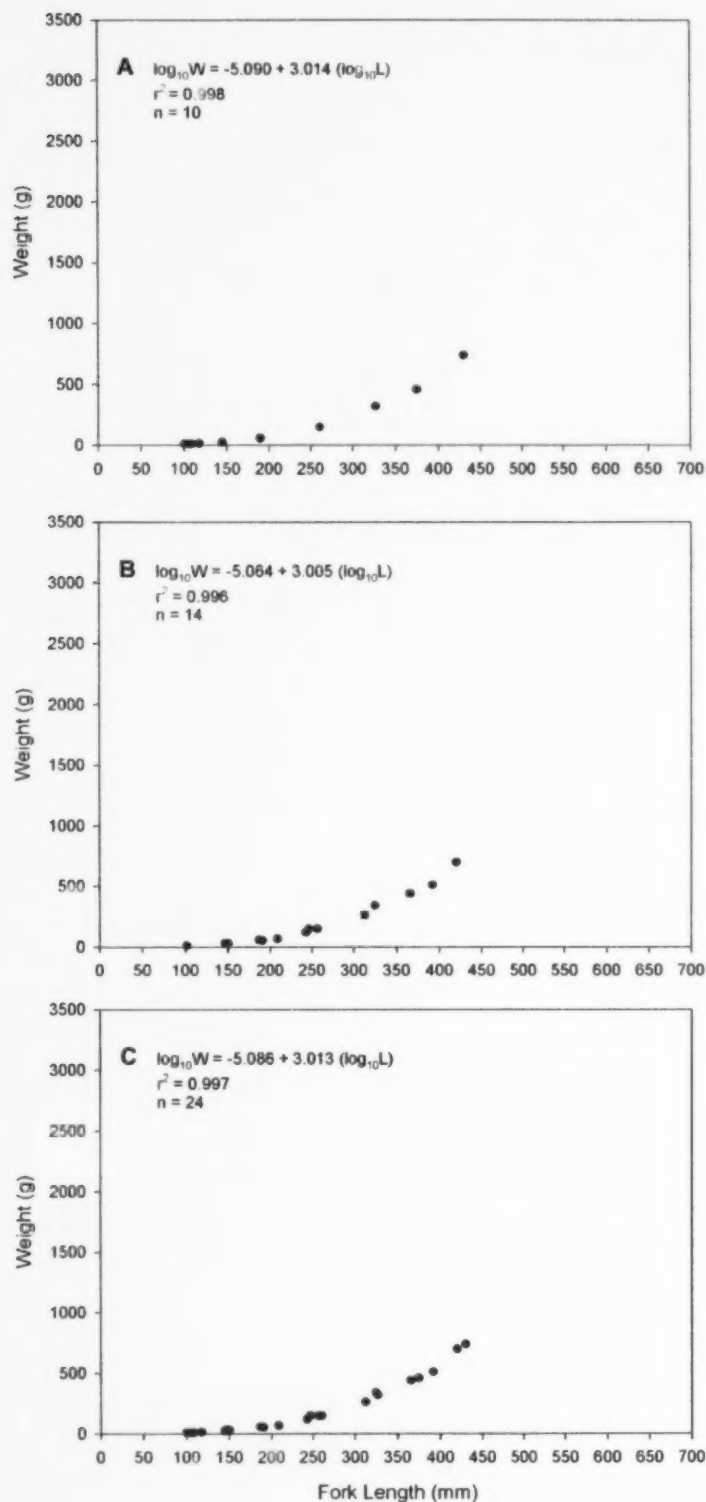


Figure 37. Relationship between weight and fork length for (A) male, (B) female and (C) all Arctic char captured in Lower Beaufort Lake in 2001.

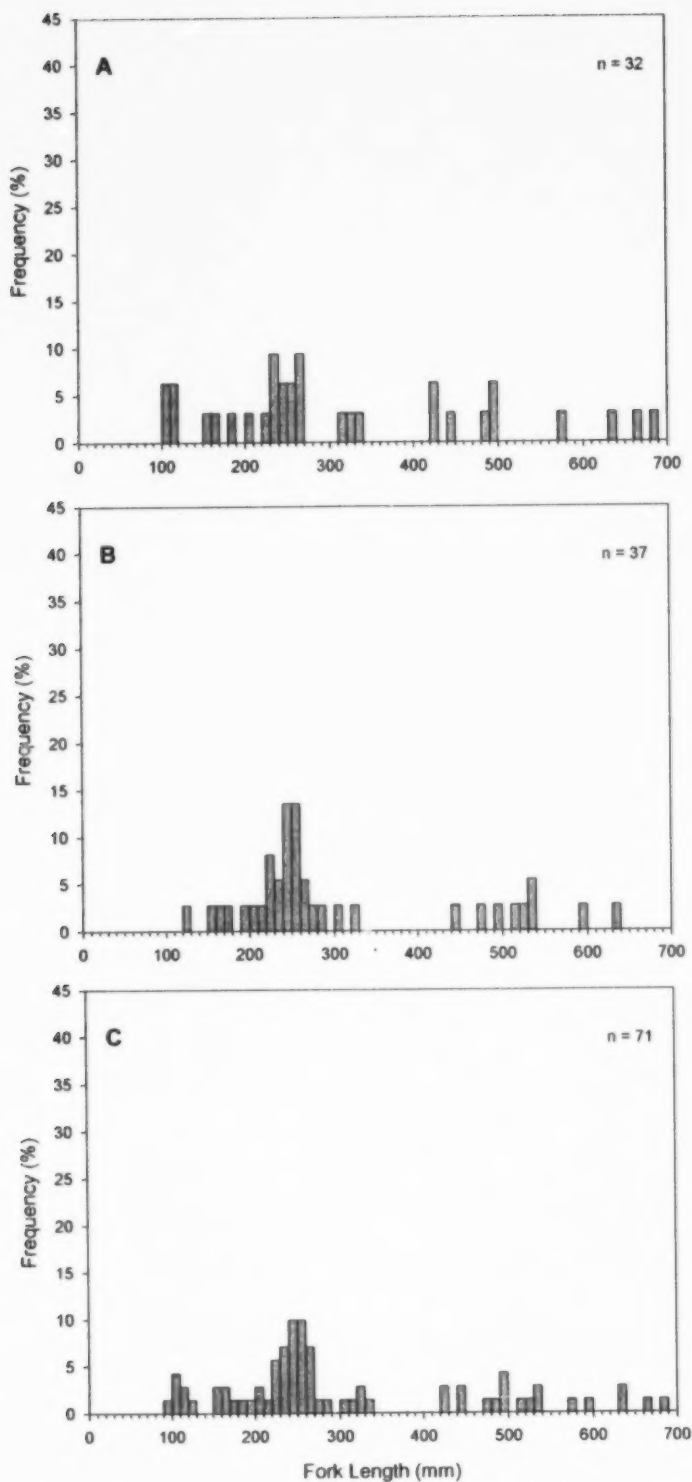


Figure 38. Length-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Murray Lake in 1998.



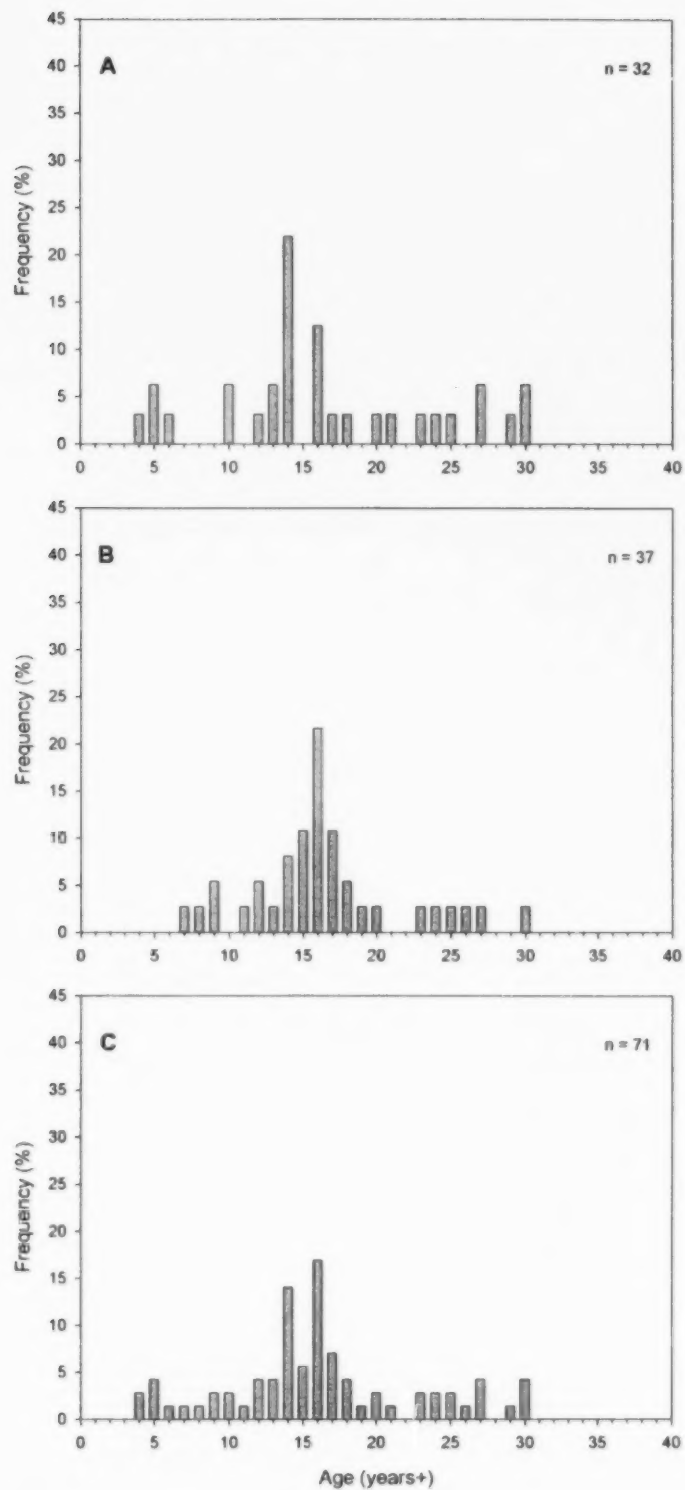


Figure 39. Age-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Murray Lake in 1998.

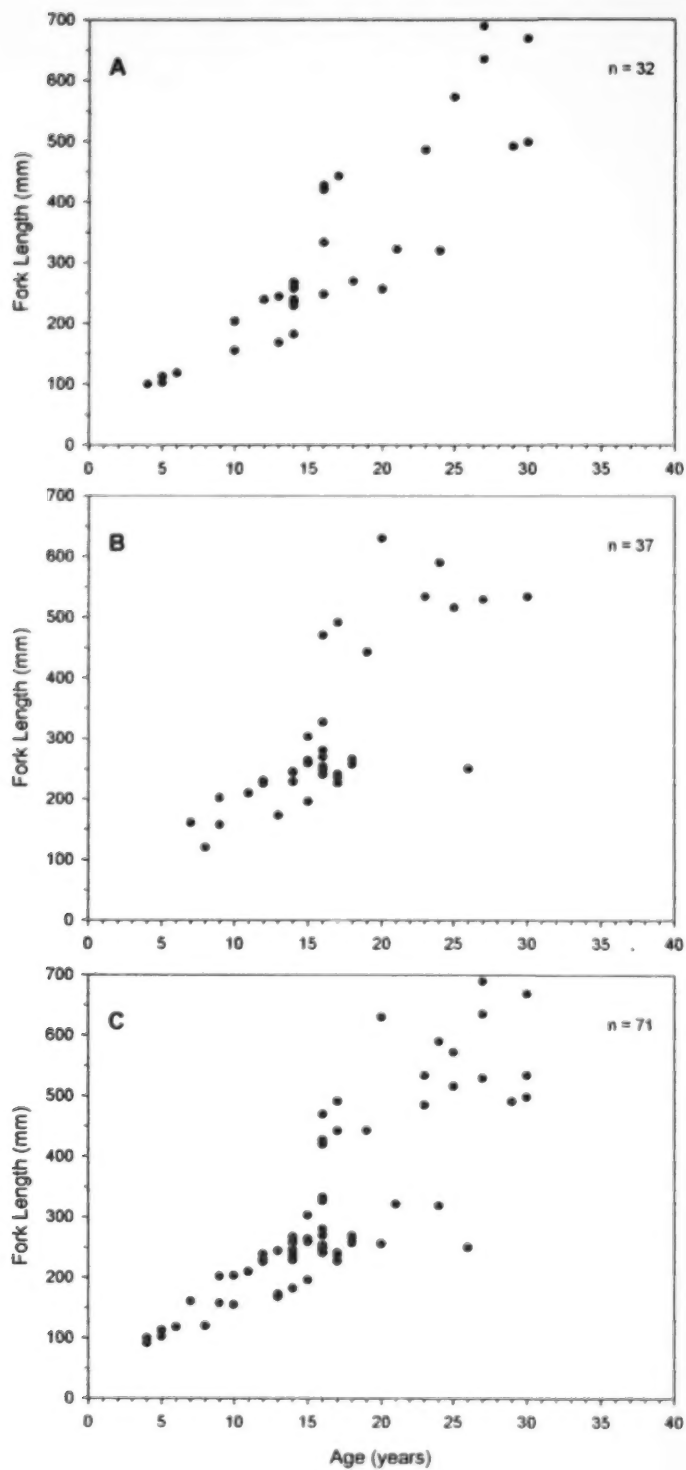


Figure 40. Relationship between fork length and age for (A) male, (B) female and (C) all Arctic char captured in Murray Lake in 1998.

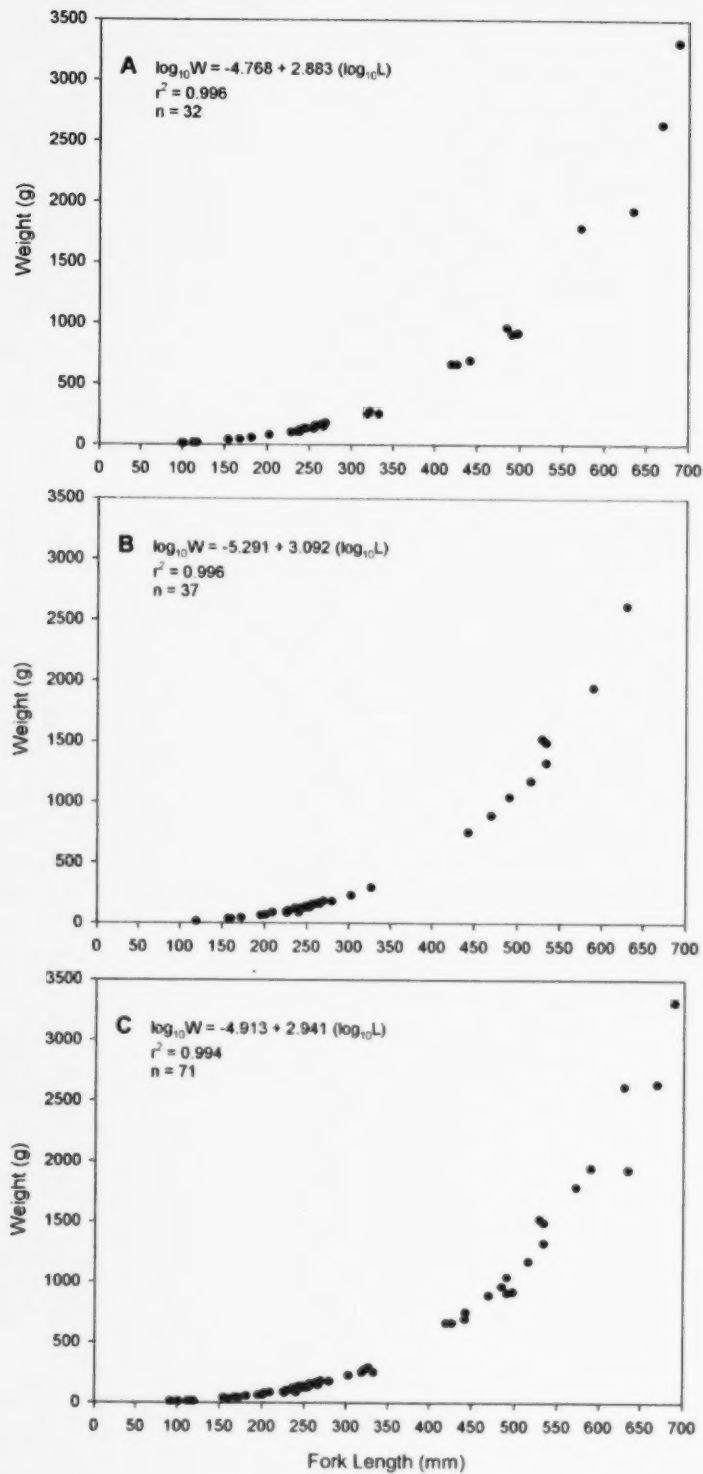


Figure 41. Relationship between weight and fork length for (A) male, (B) female and (C) all Arctic char captured in Murray Lake in 1998.

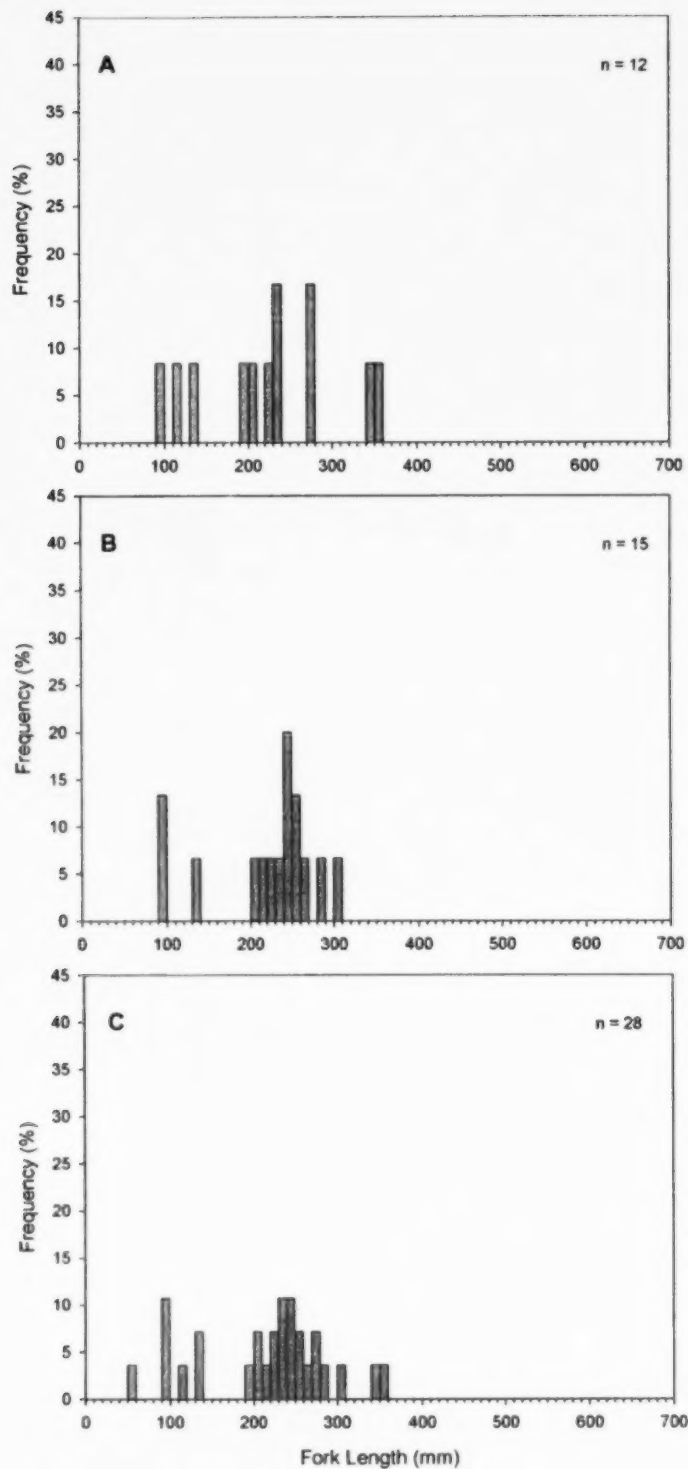


Figure 42. Length-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Rambow Hill Lake in 2002.

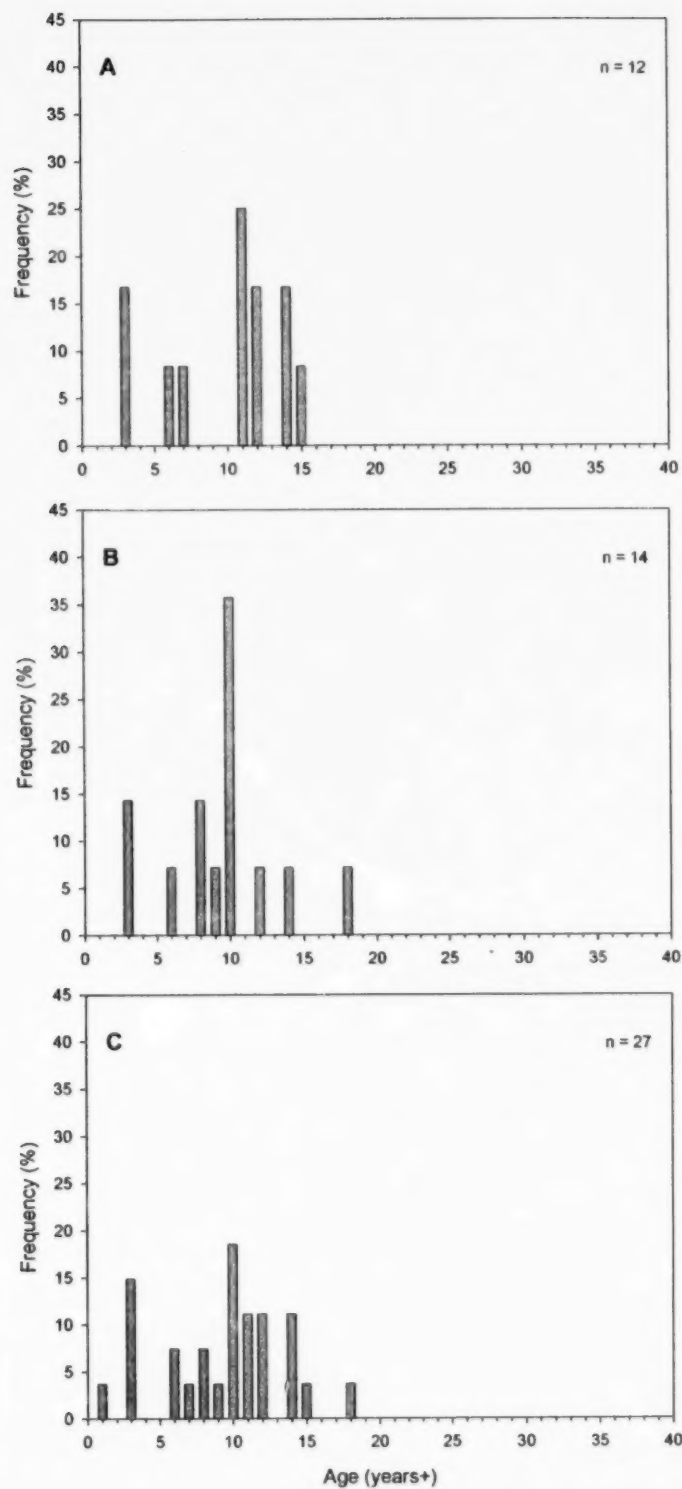


Figure 43. Age-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Rambow Hill Lake in 2002.

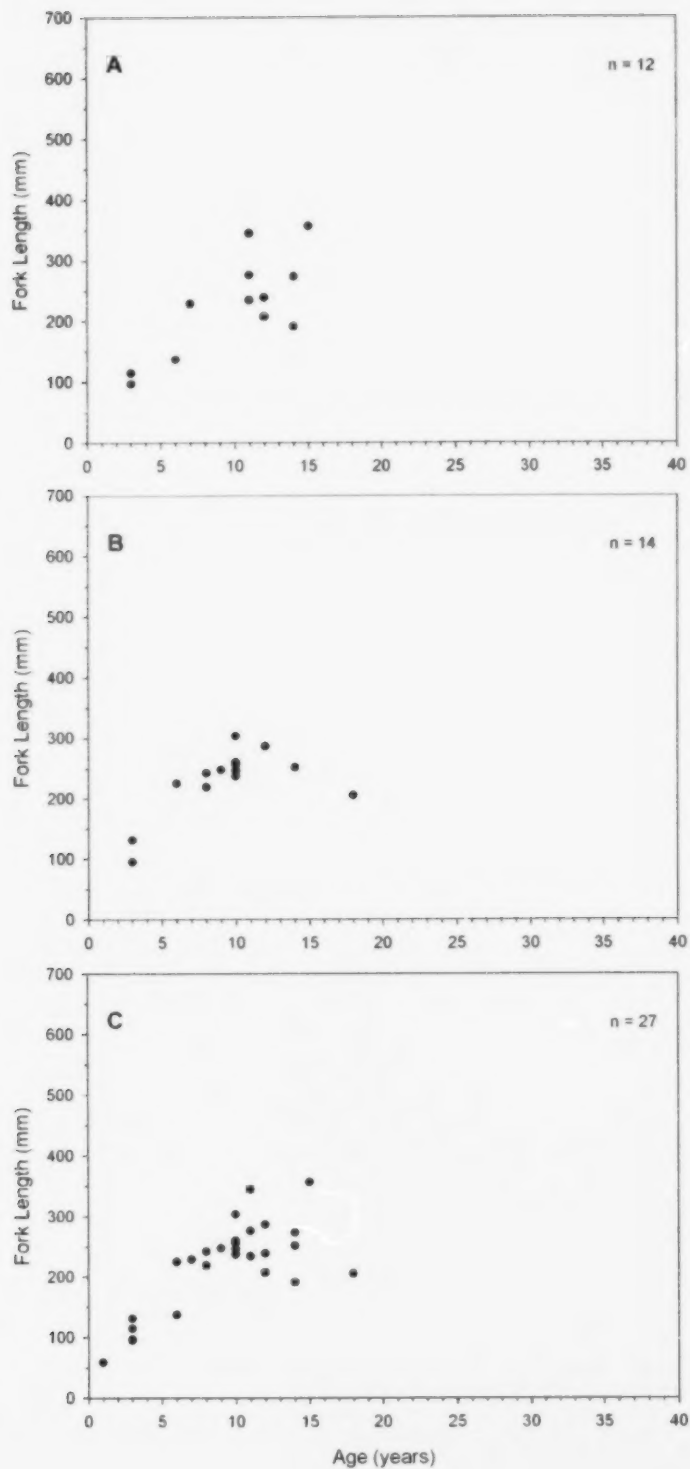


Figure 44. Relationship between fork length and age for (A) male, (B) female and (C) all Arctic char captured in Rambow Hill Lake in 2002.

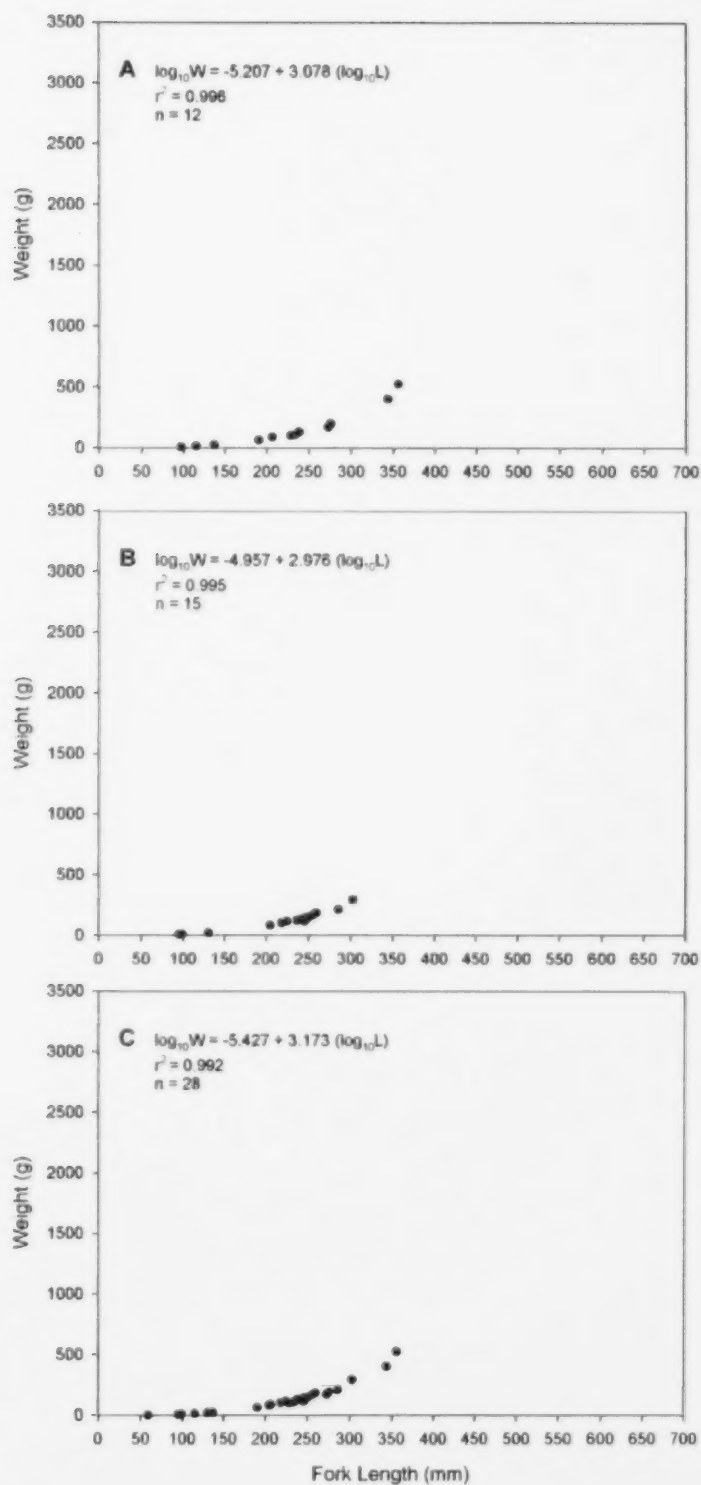


Figure 45. Relationship between weight and fork length for (A) male, (B) female and (C) all Arctic char captured in Rambow Hill Lake in 2002.

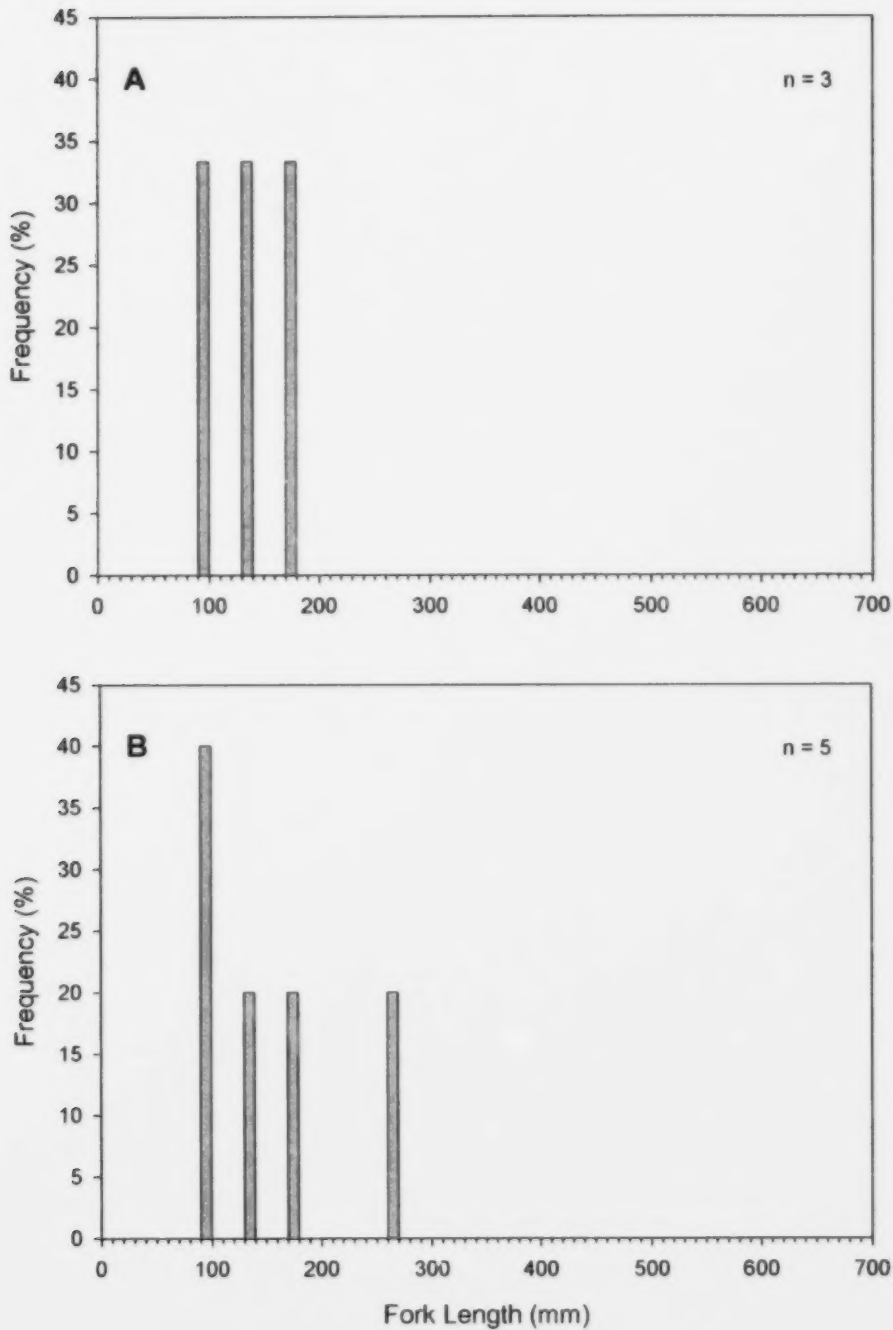


Figure 46. Length-frequency distributions for (A) male and (B) all Arctic char captured in Turnabout Lake in 2001.



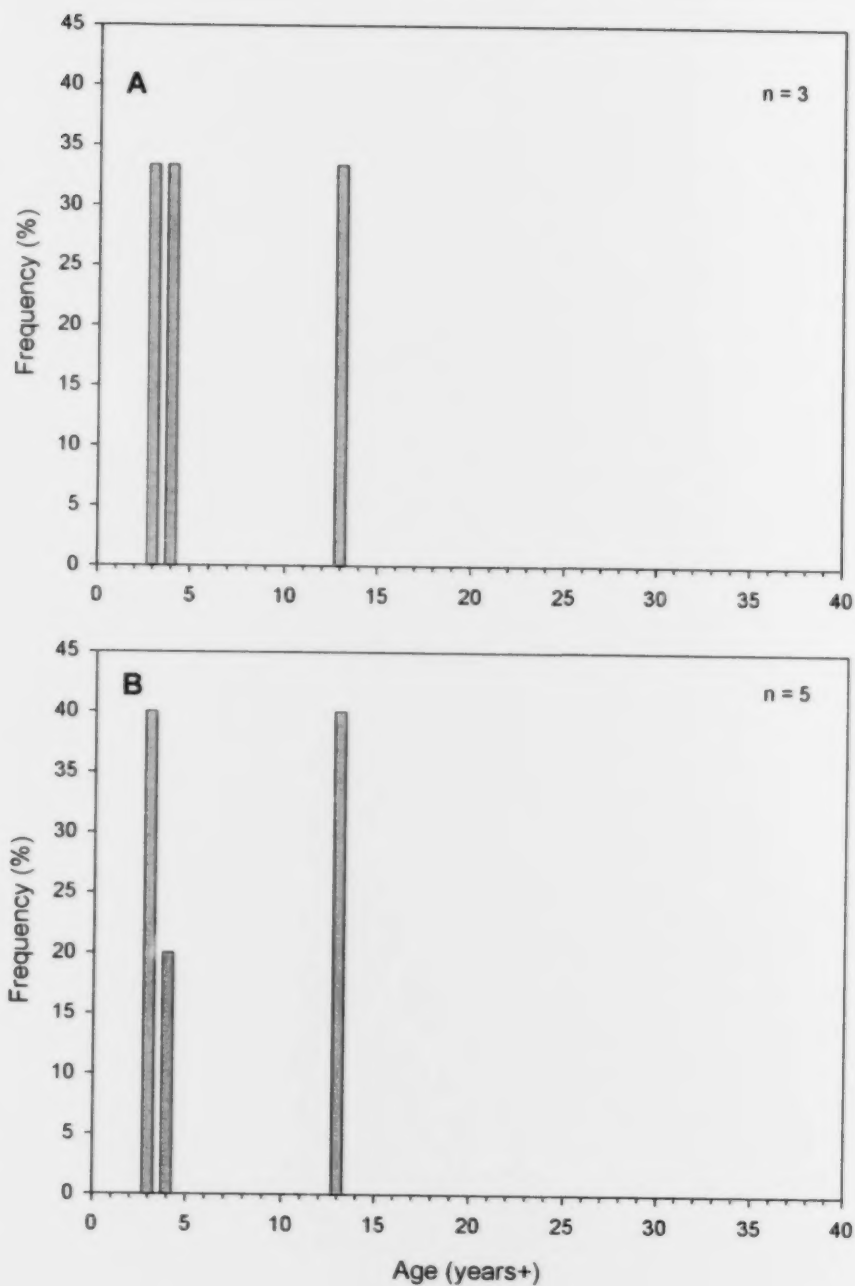


Figure 47. Age-frequency distributions for (A) male and (B) all Arctic char captured in Turnabout Lake in 2001.

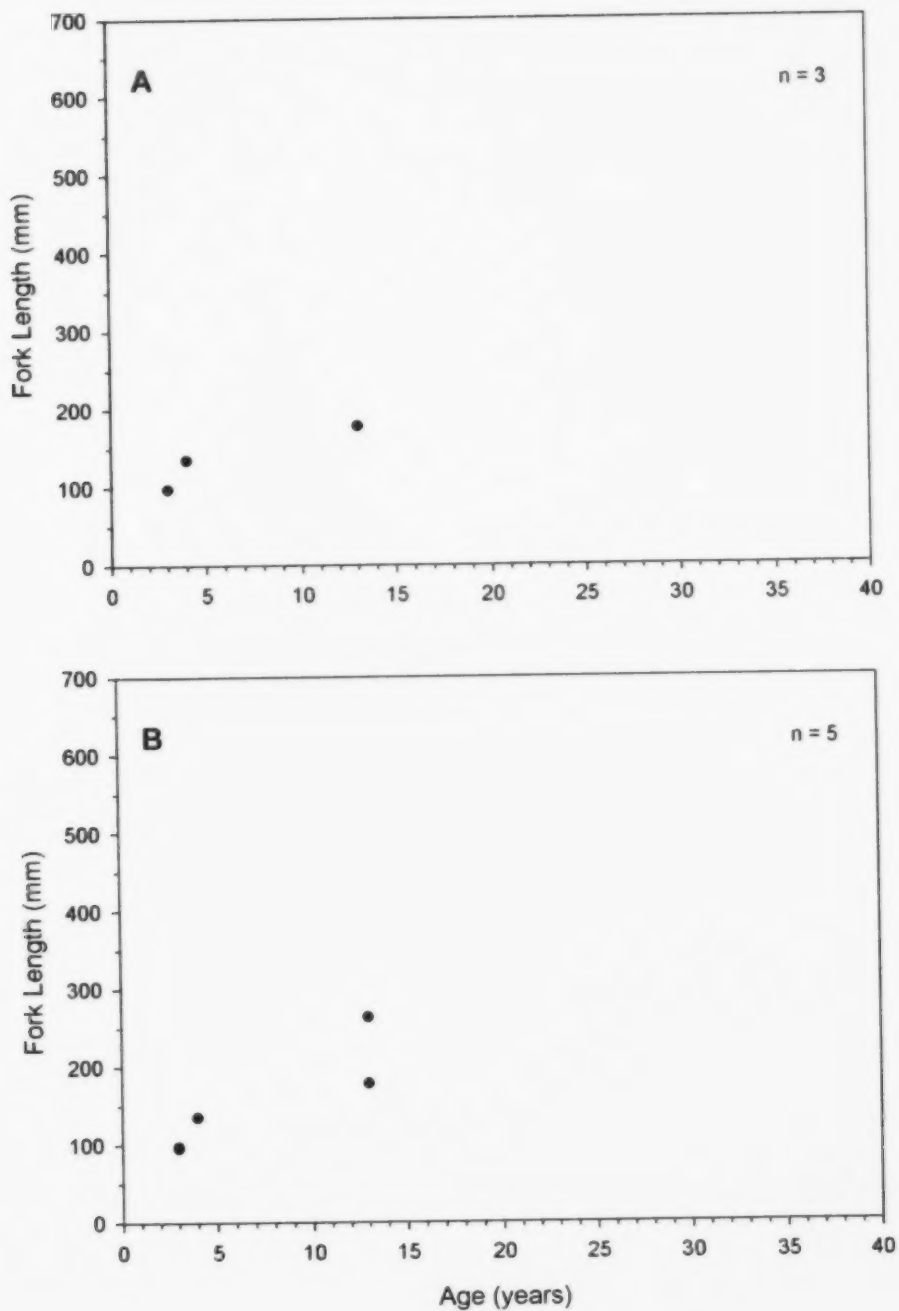


Figure 48. Relationship between fork length and age for (A) male and (B) all Arctic char captured in Turnabout Lake in 2001.

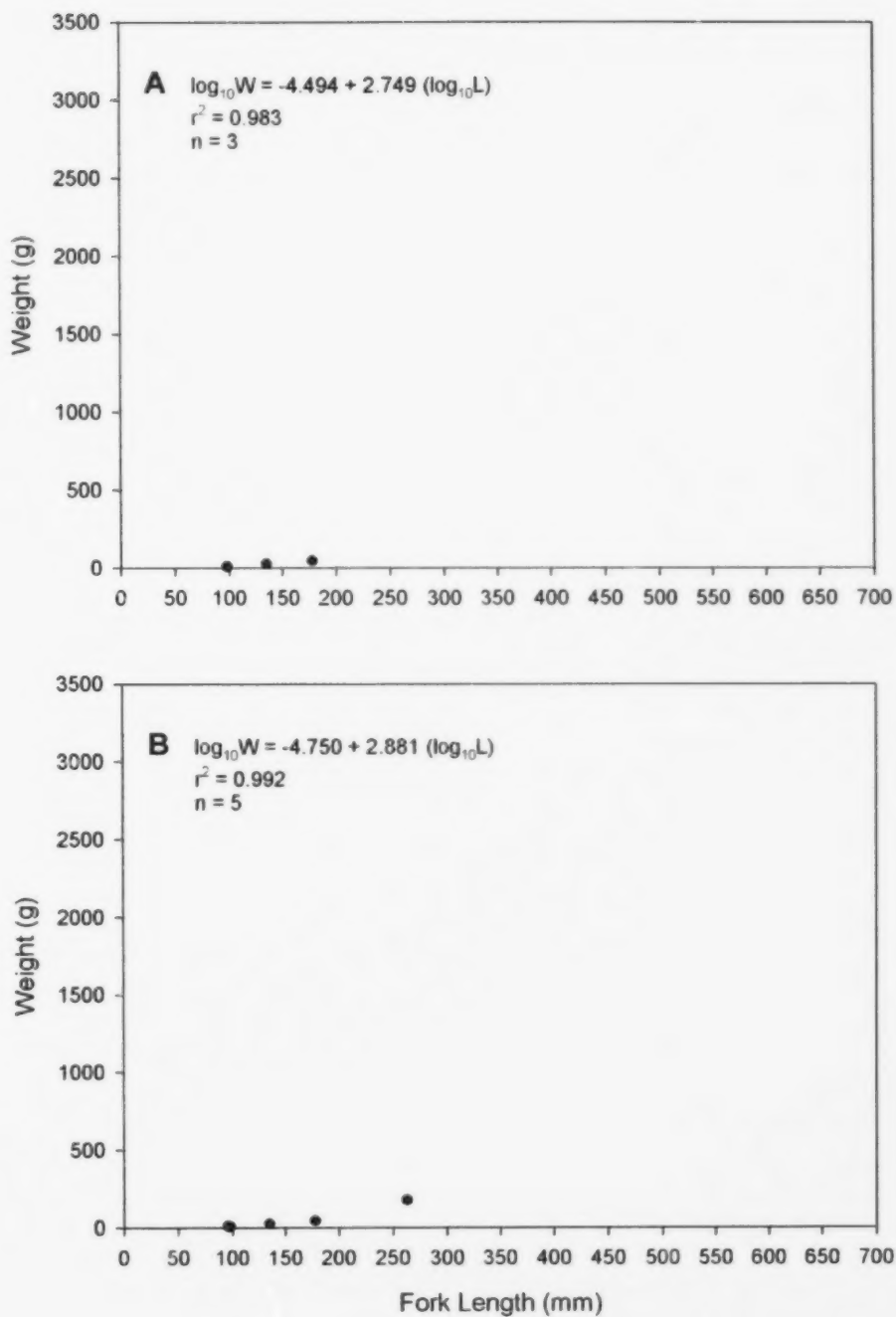


Figure 49. Relationship between weight and fork length for (A) male and (B) all Arctic char captured in Turnabout Lake in 2001.

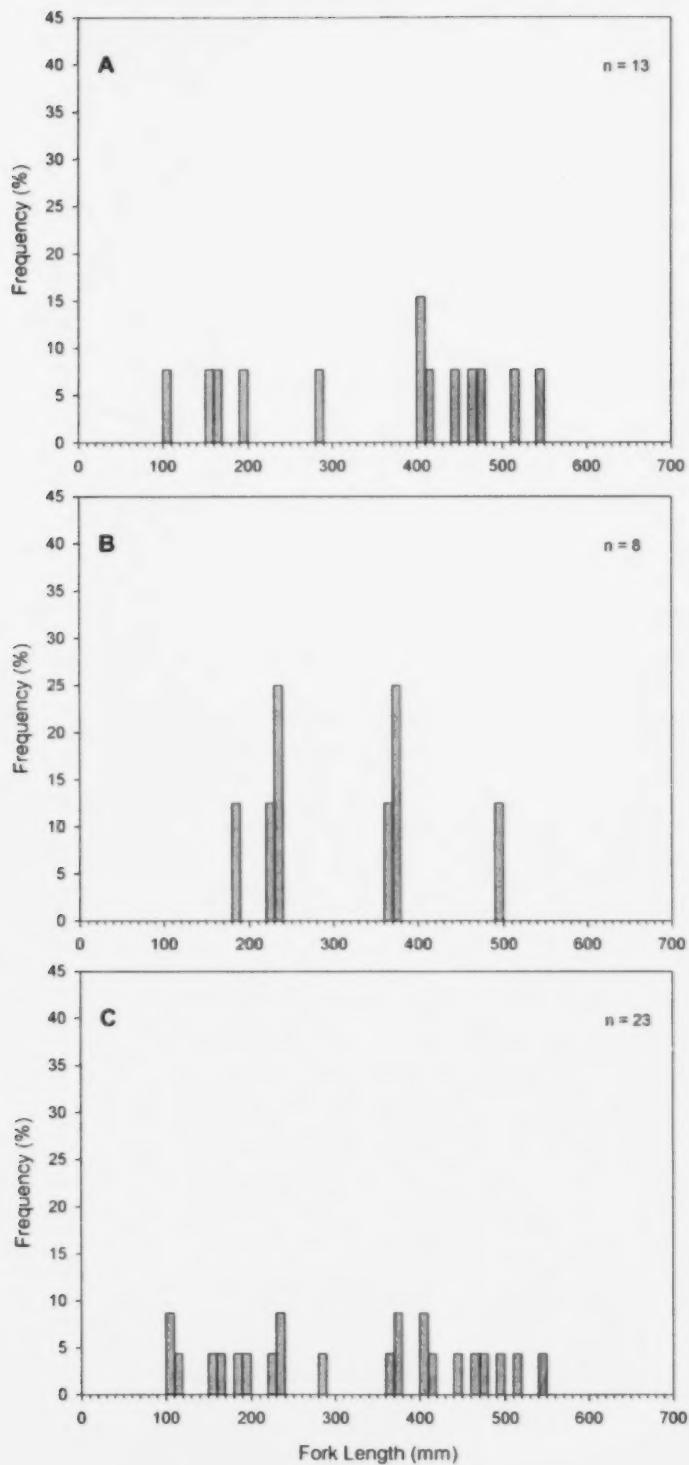


Figure 50. Length-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Upper Beaufort Lake in 2001.

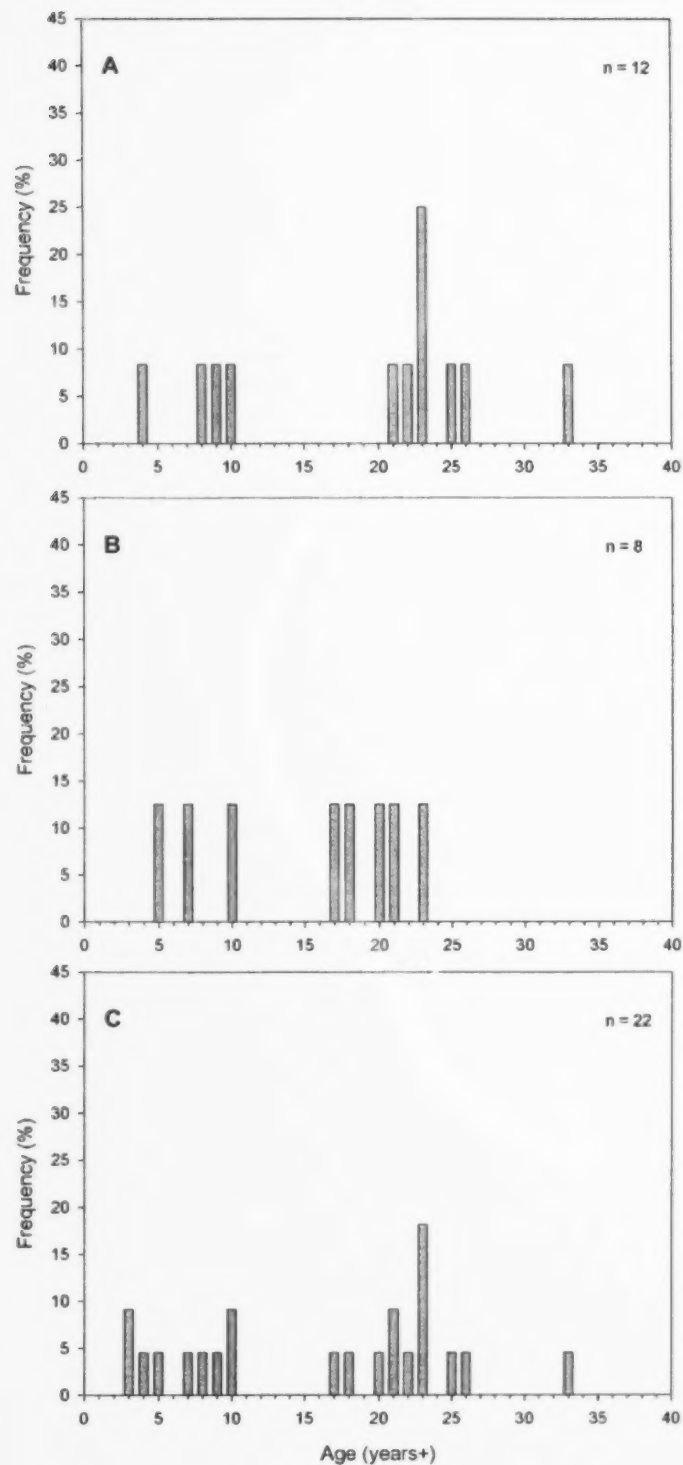


Figure 51. Age-frequency distributions for (A) male, (B) female and (C) all Arctic char captured in Upper Beaufort Lake in 2001.

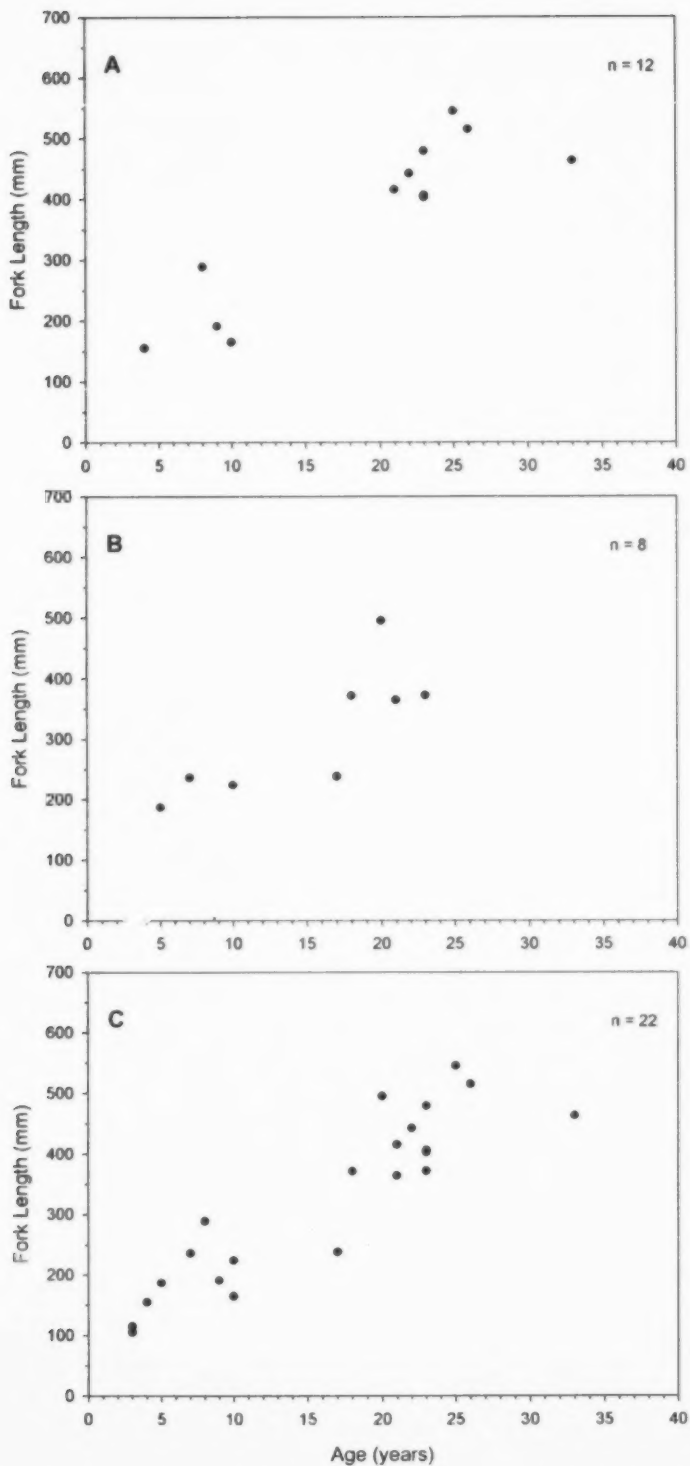


Figure 52. Relationship between fork length and age for (A) male, (B) female and (C) all Arctic char captured in Upper Beaufort Lake in 2001.

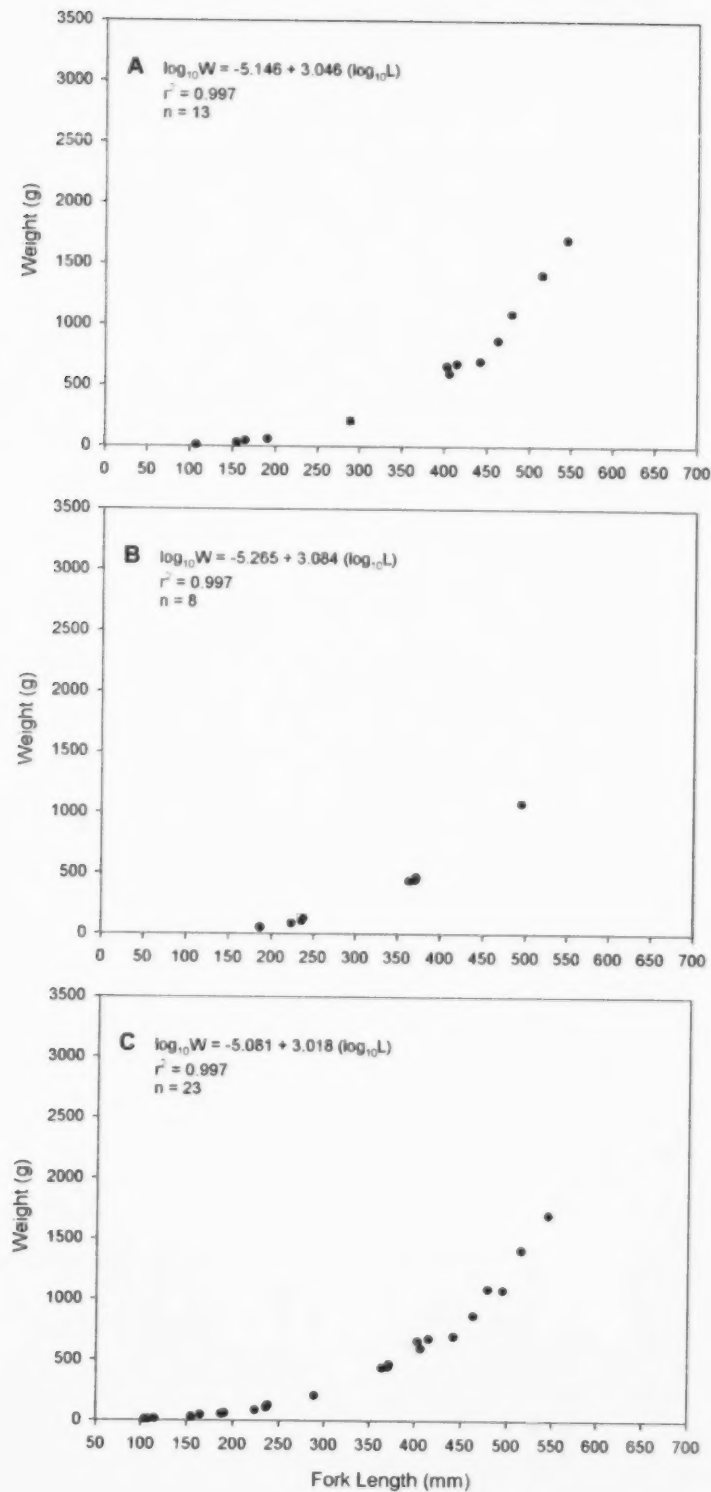


Figure 53. Relationship between weight and fork length for (A) male, (B) female and (C) all Arctic char captured in Upper Beaufort Lake in 2001.